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September 11, 2015

Ms. Rachelle Thompson  
United States Environmental Protection Agency Region 9  
75 Hawthorne Street  
San Francisco, California 94105

RE: 2014-2015 Annual Report for United Heckathorn Superfund Site  
Upland Capping System  
Richmond, California

Dear Ms. Thompson:

Enclosed please find the 2014-2015 Annual Report for the United Heckathorn Superfund Site Upland Capping System presenting inspection, monitoring, and maintenance activities performed on the upland capping and drainage system at the United Heckathorn Superfund Site located at 402 Wright Avenue, Richmond, California. This report was prepared in accordance with the *Revised Draft Operations and Maintenance Plan, Upland Capping System Former United Heckathorn Site*.

Please feel free to contact me if you have any questions or concerns with the attached report.

Sincerely,



Gary Levin  
Chief Executive Officer  
(510) 307-4091

Attachment: 2014-2015 Annual Report for United Heckathorn Superfund Site Upland Capping System

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**2014-2015 ANNUAL REPORT  
FOR  
UNITED HECKATHORN SUPERFUND SITE  
UPLAND CAPPING SYSTEM  
RICHMOND, CALIFORNIA**

*prepared for*

**Levin Richmond Terminal Corporation**  
402 Wright Avenue  
Richmond, California 94804

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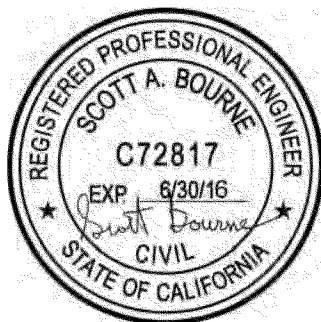
**Levin Richmond Terminal Corporation**  
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Richmond, California 94804

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Weiss Job No. 426-2026.01 Task 2

Weiss Associates' work for the Levin Richmond Terminal Corporation was conducted under my supervision. To the best of my knowledge, the data contained herein are true and accurate, are based on what can be reasonably understood as a result of this project, and satisfy the scope of work prescribed by the client for this project. The data, findings, recommendations, specifications or professional opinions were prepared solely for the use of the Levin Richmond Terminal Corporation in accordance with generally accepted professional engineering and geologic practice. We make no other warranty, either expressed or implied, and are not responsible for the interpretation by others of the contents herein.



Scott Bourne, PE  
Principal

September 11, 2015

Date

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## ACRONYMS

BMP	best management practices
CalScience	Eurofins CalScience Environmental Laboratories
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethene
DDT	dichlorodiphenyltrichloroethane
Heckathorn site or Site	United Heckathorn Superfund Site
H&R	H&R Plumbing and Drain Cleaning, Inc.
IGP	Storm Water Industrial General Permit
LRT	Levin Richmond Terminal
LRTC	Levin Richmond Terminal Corporation
msl	mean sea level
NPDES	National Pollutant Discharge Elimination System
O&M	operations and maintenance
O&M Plan	<i>Revised Draft Operations and Maintenance Plan, Upland Capping System, Former United Heckathorn Site</i>
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
Subtronic	Subtronic Corporation
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resource Control Board
µg/L	micrograms per liter
USEPA	United States Environmental Protection Agency
Weiss	Weiss Associates

## 1. INTRODUCTION

This 2014-2015 Annual Report was prepared to describe the inspection, monitoring, and maintenance activities performed on the upland capping and storm water drainage systems at the United Heckathorn Superfund Site (Heckathorn site or Site) located in the Richmond Harbor near the intersection of the Santa Fe Channel and Inner Harbor Channel (Figure 1). The Site is part of the Levin Richmond Terminal (LRT) and this report has been prepared by Weiss Associates (Weiss) under contract with the Levin Richmond Terminal Corporation (LRTC).

### 1.1 Background

From 1947 through 1966, the Heckathorn site was used for processing, packaging, and shipping of pesticides including aldrin, dieldrin, dichlorodiphenyltrichloroethane (DDT), and endrin. In 1994, the United States Environmental Protection Agency (USEPA) adopted a Record of Decision (ROD) for the Site which limits use of the property and required LRTC to design, construct, and maintain a concrete cap to prevent erosion of upland soils (USEPA, 1994b).

In 1996, LRTC entered into a Consent Decree with the USEPA, which outlined LRTC's responsibilities for long-term management of the upland capping system located on the northern half of the Main Terminal at the LRT (United States District Court, 1996). LRTC performs operations and maintenance (O&M) activities in accordance with the *Revised Draft Operations and Maintenance Plan, Upland Capping System, Former United Heckathorn Site* (O&M Plan; PES, 1999).

The *Third Five-Year Review Report for United Heckathorn Superfund Site, Richmond, California* (Third Five-Year Review; USEPA, 2011) included recommendations for additional best management practices (BMPs) to be included in the O&M Plan, including annual monitoring for cap cracking and settlement, establishing monitoring points on the cap for settlement monitoring, collecting sediment samples from the storm drain interceptors for pesticide analysis, and periodic video inspections of the underground drainage systems.

### 1.2 Upland Cap Inspections

In order to ensure long-term protection of human health and the environment, the remedial action goal established by the USEPA for upland and embankment soils is the prevention of erosion and transport into the Lauritzen Channel (USEPA, 1994a).

The objective of the cap inspection and storm water monitoring programs is to identify any potential release of pesticide-impacted soil by examining the integrity of the cap system through inspection and storm water monitoring (USEPA, 2011.)

### **1.3 Contents of this Report**

The following sections describe activities to maintain the upland cap, including:

- Capping system activities;
- Storm water system activities;
- Annual cap inspection; and
- Proposed site work for 2015-2016.

A conclusion with Weiss's opinion as to the overall condition and effectiveness of the cap in meeting the upland cap remediation objective is also included.

## **2. SITE DESCRIPTION**

The LRT is located at 402 Wright Avenue in Richmond, California (Figure 1). The Heckathorn site includes the northern five acres of the Main Terminal at the LRT, known as the Upland Area (Figure 2).

### **2.1 Upland Area Description and Current Use**

The Upland Area is bounded by Cutting Boulevard and railroad tracks to the north; South Fourth Street, Wright Avenue, and Sims Metal Management to the east; the Santa Fe Channel to the south; and the Lauritzen Channel, Manson Construction Company, and an unoccupied industrial property to the west. The majority of the Upland Area is relatively flat with surface elevations of approximately 9 feet above mean sea level (msl). The portion of the Upland Area north of the Lauritzen Channel was raised to approximately 15 feet above msl.

The Upland Area is used primarily for storage of dry bulk product and railroad operations. Photographs taken during the site inspection are included in Appendix A.

### **2.2 Nearby Water Bodies**

The storm water system in the Upland Area discharges directly to the Lauritzen Channel (Figure 2). The Lauritzen Channel is connected to the San Francisco Bay via the Santa Fe Channel and Richmond Inner Harbor.

### **2.3 Upland Area Cap**

Construction of the concrete cap at the Upland Area began in July 1998 and was completed in July 1999. Installation of the cap consisted of: (1) site grading to promote surface runoff to collection points; (2) installation of a drainage system to collect surface runoff, including BMPs for storm water pollution prevention; and (3) construction of a reinforced concrete cap in the majority of the 5-acre area and construction of a geotextile fabric and gravel cap in the railroad track area. The concrete and gravel/geotextile cap areas were designed to protect against erosion of contaminated soils and subsequent flow into the channel associated with surface water runoff (USEPA, 2011).

### **2.4 Storm Water Collection System**

The Upland Area storm water collection system (Figure 3) was installed in 1998 and is part of the larger storm water collection system at the LRT. The facility is paved with asphalt and concrete and is graded to direct surface water runoff via sheet flow or shallow swales to drop inlets.



The drop inlets drain to below-grade interceptors via underground pipe. Five storm water interceptors, SW-3 through SW-7, are located within the Upland Area storm water drainage system and receive storm water runoff. The wooden pier deck that extends over open water is not connected to the storm water drainage system.

Storm water interceptors SW-3 through SW-7 were constructed with compartments and steel baffles to allow the settling of sediments and separation of oil/grease and floatables, thereby decreasing the potential for outflow of these pollutants into the Lauritzen Channel. Interceptors SW-3 through SW-7 were constructed with a capacity to provide a five-minute retention time during a 10-year, 24-hour storm event (PES, 1999). Interceptors SW-3 through SW-7 are equipped with normally closed gate valves, which can be opened during heavy rains to enable discharge to the Lauritzen Channel.

Between 2009 and 2012, interceptor SW-3 was modified through the installation of two new pumps, valves, and piping to enable discharge to a 20,000-gallon nominal capacity rectangular tank for sediment settling. Storm water collected in the tank was discharged or reused on-site for dust suppression.

In 2014, pumps and piping were installed to convey storm water collected in the SW-4, SW-6, and SW-7 interceptors to interceptor SW-5. Pumps, piping, and a 20,000-gallon nominal capacity rectangular tank were then installed to facilitate additional sediment removal for the combined SW-4/-5/-6/-7 interceptors, prior to discharge or reuse on-site for dust suppression.

In 2015, piping was installed from interceptor SW-3 to the 20,000 gallon tank located near interceptor SW-5, and the 20,000 gallon tank near interceptor SW-3 was relocated to the SW-5 area. A storm water treatment system will be installed at the SW-5 discharge location in 2015 to prevent or reduce the discharge of pollutants in storm water from industrial activities. The system will treat storm water pumped from interceptors SW-3, SW-4, SW-5, SW-6, and SW-7 using flocculation, settling, and filtration methods. Treated storm water will be discharged to the Lauritzen Channel via the SW-5 outfall.

### **3. CAPPING SYSTEM ACTIVITIES**

This section describes repair and routine O&M of the upland capping system performed during the 2014-2015 reporting year. No maintenance activities involving the disturbance of or excavation into underlying, impacted soil were conducted.

#### **3.1 Repair of Concrete Cap**

No maintenance or major repair involving replacement of portions of the concrete cap was conducted during the 2014-2015 reporting year.

#### **3.2 Repair of Gravel Cover**

Additional rock was placed on top of the existing gravel cover in the vicinity of interceptor SW-5 in July 2014 to ensure proper coverage.

No other major repair involving replacement of portions of the gravel cover was conducted during the 2014-2015 reporting year.

#### **3.3 Erosion Control**

No major erosion control work was performed during the 2014-2015 reporting year.

## 4. STORM WATER SYSTEM ACTIVITIES

This section describes the storm water collection system activities performed during the 2014-2015 reporting period. Activities included sampling of storm water, cleaning and inspection of all Heckathorn storm drain piping, and repairs of damaged piping associated with interceptors SW-3 and SW-5.

### 4.1 Storm Water Sampling

The O&M Plan (PES, 1999) requires storm water sampling to assess the effectiveness of the upland capping system. During the 2014-2015 reporting year, storm water discharges associated with industrial activities at the LRT were subject to the State Water Resources Control Board (SWRCB) Water Quality Order 97-03-DWQ for National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 (*Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities excluding Construction Activities*), also referred to as the Storm Water Industrial General Permit (1997 IGP; SWRCB, 1997). The O&M Plan expands the storm water monitoring requirements to include sampling for pesticides by USEPA Method 8081A in storm water discharges originating from the Upland Area (i.e., interceptors SW-3 through SW-7). Specifically, the O&M Plan requires samples to be collected at the outlet of each of the five interceptors. However, due to upgrades to storm water treatment at LRT, storm water collected at interceptors SW-4 through SW-7 was rerouted to a single sedimentation tank beginning in 2014 (as detailed in Section 2.4). Samples during the 2014-2015 reporting year were therefore collected from the SW-3 discharge and combined SW-4 through SW-7 discharges (SW-4/-5/-6/-7).

Storm water monitoring requirements for the 2014-2015 reporting year are documented in LRTC's *Storm Water Pollution Prevention Plan* (SWPPP; Weiss, 2014b), which details monitoring procedures to comply with the 1997 IGP and the O&M Plan. Sample collection during the 2014-2015 reporting year was performed as follows:

- Sampling during four storm events producing discharges during the wet season (October through May);
- Collecting samples from a storm preceded by at least three days of dry weather; and
- Collecting samples during normal operating hours.

As of July 1, 2015, storm water discharges at LRT are regulated under the SWRCB Water Quality Order No. 2014-0057-DWQ, NPDES General Permit No. CAS000001 (2015 IGP), which is the successor permit to the 1997 IGP. Sample collection beginning in the 2015-2016 reporting year will be performed in conjunction with the 2015 IGP, revised LRT SWPPP (Weiss, 2015), and the O&M Plan.

#### 4.1.1 Sample Results

During the 2014-2015 reporting year, storm water from the SW-3 and the combined SW-4/-5/-6/-7 discharge locations was sampled during three storm events, on November 20, December 2, and December 11, 2014. No discharge was produced at either location during the fourth storm event on February 6, 2015. Tables 1 and 2 provide the laboratory analytical results for pesticides and general parameters/metals, respectively. This Annual Report focuses on the evaluation of analytical results for pesticides.

Storm water samples were submitted to Eurofins CalScience Environmental Laboratories (Calscience) in Concord, California. Original laboratory reports, including applicable chain-of-custody forms, are included as part of the *2014-2015 Annual Storm Water Monitoring Report*<sup>1</sup> provided in Appendix B.

Pesticides were detected in the November 20, 2014 storm water samples as follows:

- DDT was detected at a concentration of 0.022 micrograms per liter (µg/L) in the SW-4 through SW-7 discharge;
- Endosulfan I was detected at a concentration of 0.042 µg/L in the SW-4 through SW-7 discharge;
- Endrin was detected at a concentration of 0.012 µg/L in the SW-4 through SW-7 discharge; and
- Heptachlor was detected at a concentration of 0.016 µg/L in the SW-3 discharge.

Pesticides were detected in the December 2, 2014 storm water samples as follows:

- DDT was detected at concentrations of 0.019 and 0.0035 µg/L in the SW-3 and SW-4 through SW-7 discharges, respectively.
- Dichlorodiphenyldichloroethene (DDE) was detected at a concentration of 0.014 µg/L in the SW-3 discharge.
- Dichlorodiphenyldichloroethane (DDD) was detected at a concentration of 0.0028 µg/L in the SW-3 discharge.

Pesticides were detected in the December 11, 2014 storm water samples as follows:

- DDT was detected at concentrations of 0.039 and 0.0049 µg/L in the SW-3 and SW-4 through SW-7 discharges, respectively.
- DDD was detected at concentrations of 0.0023 and 0.0033 µg/L in the SW-3 and SW-4 through SW-7 discharges, respectively.
- Endosulfan I was detected at a concentration of 0.030 µg/L in the SW-3 discharge.

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<sup>1</sup> Note that laboratory analytical reports include results from other sampling locations (i.e., TS1-E, SW-11, and SW-12) collected as part of the LRT Storm Water Monitoring Program for 2014-2015.

#### 4.1.2 *Quality Assurance/Quality Control*

The O&M Plan (PES, 1999) requires at least one duplicate sample be collected per storm sampling event. During the 2014-2015 reporting year, duplicate samples were submitted from the November 20 and December 2, 2014 sampling events. During the December 11, 2014 sampling event a duplicate sample was submitted for a discharge location not associated with the Upland Cap area at LRT. No data quality issues were reported through the data validation process.

#### 4.1.3 *Assessment of Results*

The pesticides detected in storm water samples collected during the 2014-2015 storm water season were consistent with historical concentrations. Appendix C provides concentration trend charts for DDT<sup>2</sup> and dieldrin from 2011 to present for SW-3, SW-4, SW-5, SW-6, SW-7, and the combined SW-4/-5/-6/-7 storm water discharges. DDT and dieldrin were selected for plotting because they have final remediation levels established in the ROD (USEPA, 1994b). The charts provide both detected concentrations and non-detect results.<sup>3</sup> Prior to the 2013-2014 storm water season, the laboratory method detection limits for DDT and dieldrin were above the remediation goals and therefore the current trend charts provide limited information. Lower detection limits were instituted beginning in February 2014.

Annual storm water monitoring will continue in the 2015-2016 reporting year in accordance with the SWPPP and O&M Plan. Trend charts will be updated annually with new data.

### 4.2 **Storm Water Collection System Cleaning and Inspection**

The USEPA recommended in the Third Five-Year Review (USEPA, 2011) that LRTC perform periodic underground video inspections to verify the integrity of the underground storm water collection and discharge structures in the Upland cap area. LRTC cleaned and inspected the collection systems associated with interceptors SW-4 and SW-5 during the 2013-2014 reporting year as detailed in the 2013-2014 Annual Report (Weiss, 2014a). Through these inspections, a 2-foot long section of pipe leading to the SW-5 interceptor, between 9 and 11 feet west of catch basin 5D1-14A, was found to be deformed beneath the rail line and had large cracks along the bottom of the pipe.

On September 3 and 4, 2014, the remaining underground collection systems associated with interceptors SW-3, SW-6, and SW-7 were cleaned using a combination hydro-jet/vacuum truck and inspected with video equipment. LRTC contracted Subtronic Corporation (Subtronic) of Martinez, California to clean and perform video inspections on the storm water collection systems in September 2014. Material removed from the pipes included bulk product, sediments, and other debris. Wash water generated was decanted from the vacuum truck and reused on-site for dust suppression. Solids were tested and disposed off-site (see Section 4.2.4). Subtronic then inspected the storm drain lines; details of the inspection are provided below.

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<sup>2</sup> Note that plotted DDT values are for the sum of the 4,4'- and 2,4'- isomers of DDT, DDD, and DDE.

<sup>3</sup> Denoted by "<n", where *n* is the sum of the DDT, DDD, and DDE detection limits, if available, or reporting limit otherwise.

#### 4.2.1 SW-3 Inspection

Subtronic accessed and inspected approximately 850 feet of piping in the SW-3 area on September 3 and 4, 2014. A rupture was discovered in the section of pipe spanning between drain inlets 3DI-6 and 3DI-7 (Figure 3). The rupture was located approximately 36 feet to the south of drain inlet 3DI-7 and consisted of a cross-sectional break along the top half of the pipe. Additionally, a sag in the pipe was observed approximately 10 feet to the north of drain inlet 3DI-5, between inlets 3DI-5 and 3DI-6, which did not appear to affect pipe integrity. The remaining pipes were observed to be clean and in good condition, with no cracking or deformation noted and all seams intact. No groundwater infiltration or inflow was observed.

#### 4.2.2 SW-6 Inspection

Subtronic accessed and inspected approximately 200 feet of piping in the SW-6 area on September 4 and 5, 2014. The section of pipe between drain inlets 6DI-15 and 6DI-15A was observed to have a sag, approximately 65 feet from inlet 6DI-15 (Figure 3), which did not appear to affect pipe integrity. All other piping inspected in the SW-6 area was observed to be clean and in good condition, with no cracking or deformation noted and all seams intact. No groundwater infiltration or inflow was observed.

#### 4.2.3 SW-7 Inspection

Subtronic accessed and inspected approximately 150 feet of piping leading to the SW-7 interceptor on September 3, 2014. All pipes were observed to be clean and in good condition, with no cracking or deformation noted and all seams intact. No groundwater infiltration or inflow was observed.

#### 4.2.4 Waste Disposal

The cleaning and inspection activities in the Upland Cap area generated wash water and solid debris. The wash water was evaporated or reused on-site for dust suppression. Sediment collected from interceptors SW-4 and SW-5 was sampled for waste characterization on June 25, 2014; sediment from SW-3, SW-6, and SW-7 was sampled September 5, 2014. A summary of analytical results is presented in Table 3. Sample results showed that some sediment exceeded California's hazardous waste threshold for lead.<sup>4</sup>

Two 55-gallon drums containing sediment were shipped as non-Resource Conservation and Recovery Act (non-RCRA) hazardous waste by NRC Environmental Services to the Crosby & Overton facility in Long Beach, California (UESPA hazardous waste identification number CAD 028409019). The Crosby & Overton facility is authorized to receive Comprehensive Environmental Response, Compensation, and Liability Act waste under the USEPA's Offsite Rule.<sup>5</sup>

<sup>4</sup> California Code of Regulations, Title 22, Division 4.5, Chapter 11, Section 66261.24, Characteristics of Toxicity.

<sup>5</sup> Email correspondence between Kandice Bellamy of USEPA and Scott Bourne on October 23, 2014. Offsite Rule is from Code of Federal Regulation, Title 40, Section 300.440.

### 4.3 Storm Water Collection System Repairs

Based on the results of storm drain pipe inspections, LRTC subcontracted H&R Plumbing and Drain Cleaning, Inc. (H&R) of El Sobrante, California to repair the damaged sections of pipes leading to the SW-3 and SW-5 interceptors (Figure 3) on December 9, 2014. H&R performed the repairs using a trenchless method that utilized cure-in-place pipe patch manufactured by Source One Environmental. Pipe patch sleeves were wrapped around a packer, inserted into drain inlets, and pulled through the storm drain piping to the damaged area. The packer was expanded and the pipe patch was pushed against the piping, where it cured to create the patch.

## 5. ANNUAL SITE INSPECTION

This section describes the findings from the upland capping system inspection conducted during the 2014-2015 reporting year. Mr. Scott Bourne, PE and Mr. Brian Bandy of Weiss performed an annual inspection of the upland capping system on June 15, 2015, in accordance with the O&M Plan (PES, 1999). The inspection included visual observations of the concrete cap, gravel cover, and drainage system throughout the extent of the Upland Area. The findings of the inspection of the Upland Area storm water drainage system are included on the Upland Capping System Inspection Form (Appendix D); photographs taken during the inspection are included in Appendix A.

### 5.1 Concrete Cap Inspection

Visual observations of the concrete cap concentrated on cracks, joints, high-loading areas, and penetrations looking for signs of deterioration and exposure of the underlying subgrade. Any such defect was considered for its potential to compromise the ability of the cap to prevent wind and water erosion and lead to migration of pesticide-impacted sediments into the adjacent Lauritzen Channel, or exposure to Site workers. Particular emphasis was placed on re-examining areas with cracks and potential settlement as identified in the Third Five-Year Review (USEPA, 2011) and the 2013-2014 Annual Report (Weiss, 2014a).

- **SW-3 Area** – Minor surficial cracks were observed within and to the west of the bulk product storage area, with heavier cracks and seams located to the northwest of interceptor SW-3 at the southern end of the upland capping system (Appendix A; Photos 1, 3, 4, and 5). Cracks and concrete seams identified as high priority in the previous inspections were observed to have been patched (Appendix A; Photo 2).
- **SW-4 Area** – Areas of minor surficial cracks were observed along the rail line south of interceptor SW-4 (Appendix A; Photo 6). Sealant was noted extending from the southeast corner of interceptor SW-4 toward the east (Appendix A; Photo 7). Minor surficial cracks were observed north of interceptor SW-4 (Appendix A; Photo 8).
- **SW-5 Area** – Minor cracks were noted north and south of interceptor SW-5 (Appendix A; Photos 9 and 11). Light gravel cover was observed to the north of interceptor SW-5 (Appendix A; Photo 10).
- **SW-6 Area** – Minor cracks were noted north and northeast of interceptor SW-6 (Appendix A; Photos 12 and 14). Seams and surficial cracks were observed in the eastern swale of the Main Terminal (Appendix A; Photos 15 and 16). Small areas of concrete deterioration were observed in the southern portion of the eastern swale of the Main Terminal (Appendix A; Photos 17 and 18).
- **SW-7 Area** – Minor cracks were observed to the northeast of interceptor SW-7 (Appendix A; Photo 13).



Figure 4 shows the locations of photographs taken to document cracks and gaps shown in Appendix A and described above. No evidence of differential settling or vertical displacement was observed.

No evidence of cracks, gaps, significant cap deterioration, or other material breach with apparent potential for exposure of the underlying subgrade was observed during the inspection. Weiss recommends that LRTC continue to monitor minor cracks noted during the inspection. No repairs are recommended at this time.

## 5.2 Gravel Cover Inspection

Visual observations of the gravel cover concentrated on identifying areas around the rail and shoreline where gravel cover was thin. A geotextile membrane underlies the gravel cover, but was not visually observed in any of the areas inspected. Below is a summary of observations from the concrete cap inspection.

- **SW-4 Area** – The gravel cover in this area was observed to be thin in one area; the underlying geotextile fabric was not exposed in this area (Appendix A; Photo 6).
- **SW-5 Area** – The gravel cover was observed to be thin in some areas, while the underlying geotextile fabric was not exposed (Appendix A; Photo 10).

No evidence of differential settling or vertical displacement was observed. Overall, the gravel cover was found to be in good condition and functioning properly with no apparent potential for exposure of the underlying subgrade observed. Weiss recommends that LRTC continue to regularly inspect the gravel cover and perform corrective actions as detailed in Section 6.

## 5.3 Storm Water Collection System Inspection

Visual observations were conducted at the drain inlets and the SW-3, SW-4, SW-5, SW-6, and SW-7 interceptors on June 15, 2015. The interceptors were inspected in June and September 2014 during cleaning of the drainage systems. Details of video inspections of underground pipe at interceptors SW-3, SW-6, and SW-7 are described in Section 4.2. No structural improvements to the drain inlets were found to be necessary during the inspection. The interceptors were found to be in working order with no corrective actions required.

## 6. PROPOSED SITE WORK FOR 2015-2016

During the 2015-2016 reporting year, O&M activities will continue in accordance with the O&M Plan (PES, 1999):

- Storm water discharge samples will be collected from the combined SW-3 through SW-7 discharge location.
- An annual inspection of the concrete cap and gravel cover in the Upland Area will be performed in the early summer of 2016.
- Inspections of the upland capping system, including the drainage system, will continue as part of the SWPPP (Weiss, 2015) compliance activities and daily operations.

Any repairs to the cap, if required, will be documented and reported in a memorandum to the USEPA and the California Department of Toxic Substances Control. Proposed Site work under the O&M Plan for 2015-2016 is presented in Table 4.

LRTC is in the process of installing a roadway in the upland cap area across three railroad tracks as shown in Figure 4. This work is outside the scope of the O&M Plan but is planned to be completed during the 2015-2016 reporting year.

## 7. CONCLUSIONS

The annual upland capping system inspection found that the surface cap is in overall good condition and effectively functions to prevent erosion of the underlying soil. Damage was discovered in the underground storm water collection systems at SW-3 and SW-5, which was repaired during the 2014-2015 season.

Continued monitoring and maintenance is required. Maintenance recommendations include:

- Add gravel to gravel cover areas of SW-4 and SW-5;
- Monitor deteriorated concrete in the southern portion of the eastern swale of the Main Terminal at SW-6, and replace affected sections of concrete should further deterioration occur or evidence of underlying soil be observed;
- Implement BMPs identified in the LRT SWPPP (Weiss, 2015).

Pesticides were detected in storm water discharge samples during the 2014-2015 storm water season at concentrations consistent with historical detections. Continued monitoring of the Upland Area's storm water discharges for the presence of pesticides is necessary.

A storm water treatment system will be installed near the SW-5 interceptor to treat the combined storm water discharge from the Upland Cap Area. Treatment will include flocculation, sedimentation, and filtration.

## 8. REFERENCES

PES Environmental, Inc., 1999. *Revised Draft Operations and Maintenance Plan, Upland Capping System, Former United Heckathorn Site*, March.

State Water Resources Control Board, 1997. *Water Quality Order 97-03-DWQ for National Pollutant Discharge Elimination System General Permit No. CAS000001 (Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities excluding Construction Activities)*, April.

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## **FIGURES**

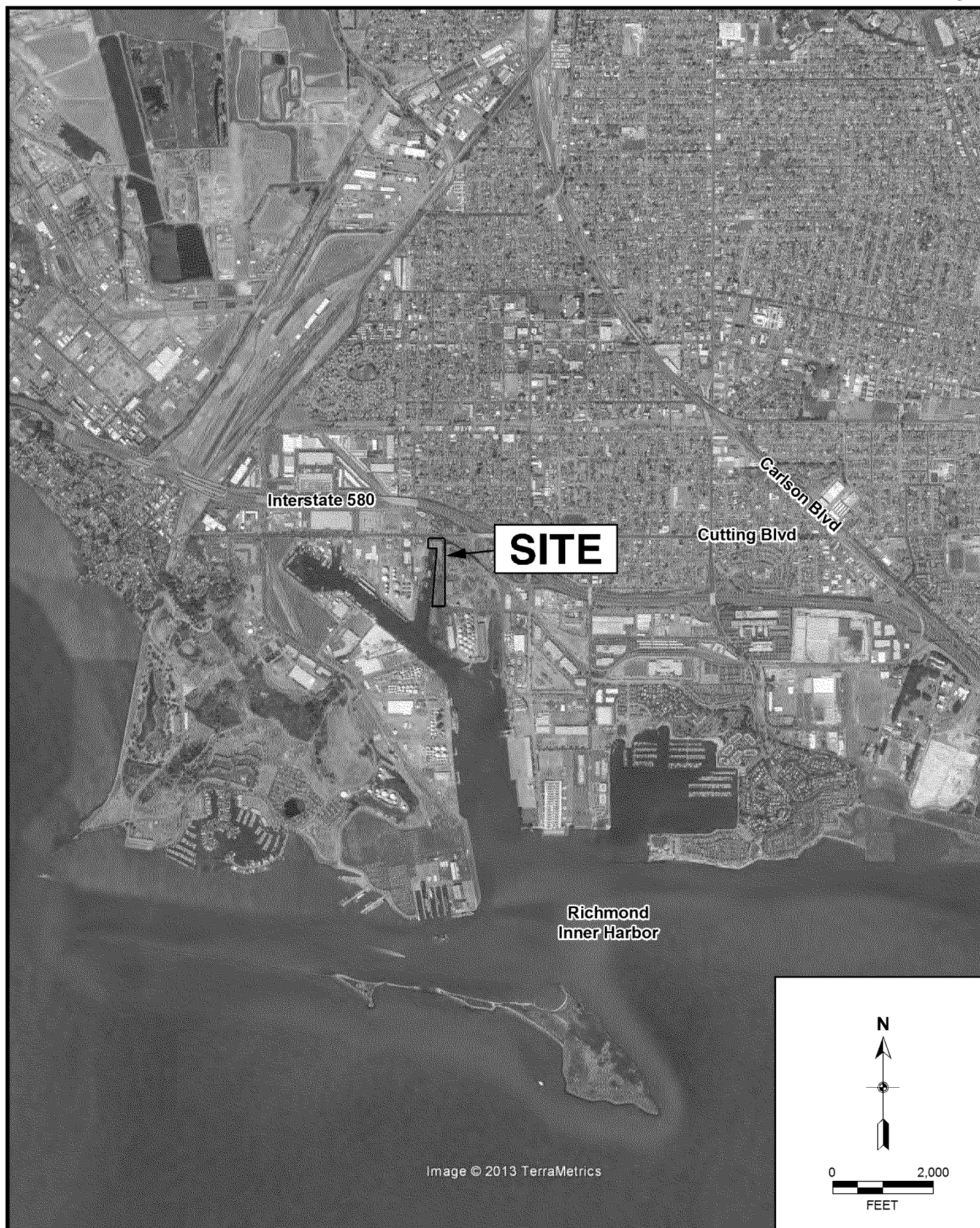


Figure 1. Site Location Map — United Heckathorn Superfund Site, Richmond, California



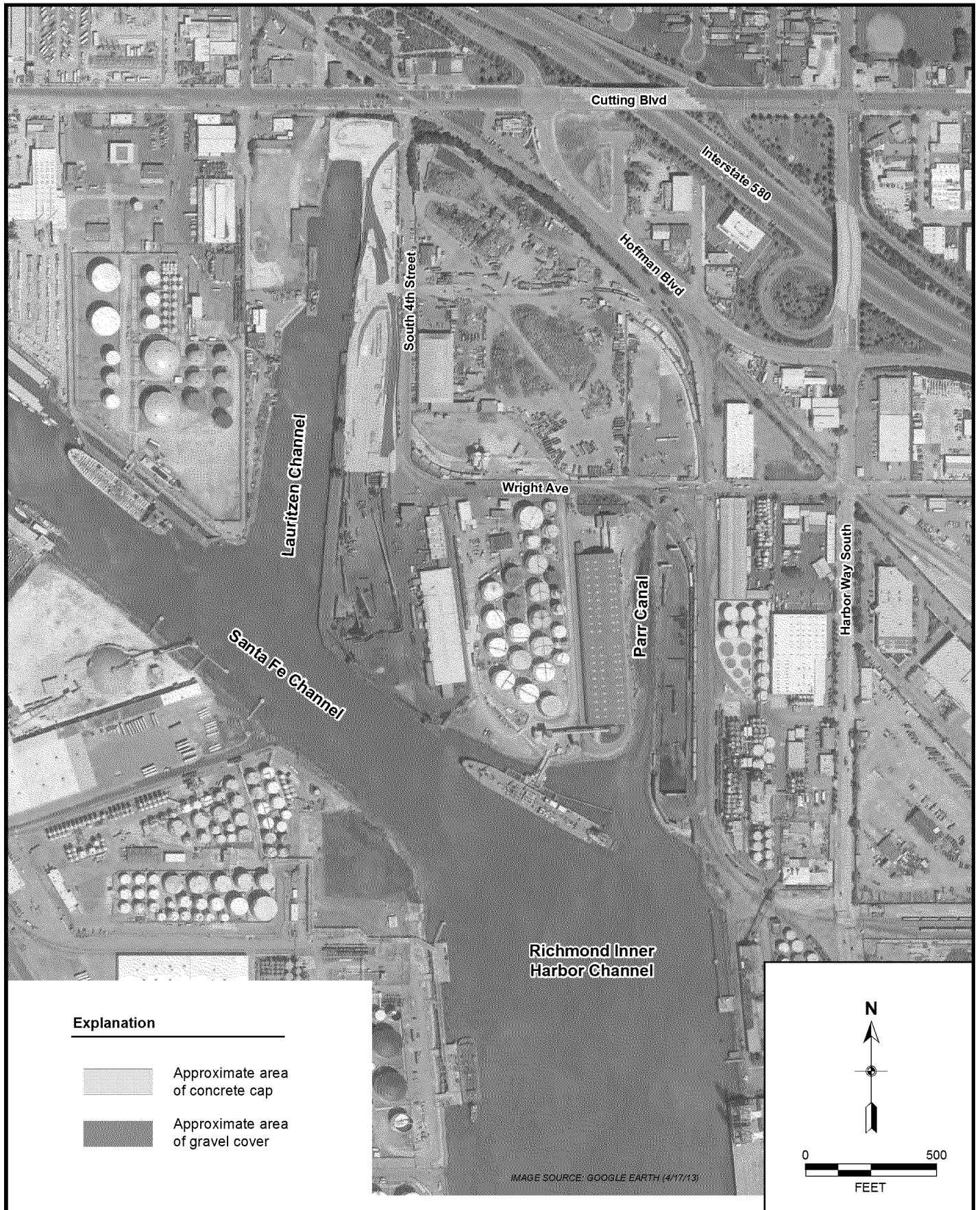


Figure 2. Site Layout — United Heckathorn Superfund Site, Richmond, California

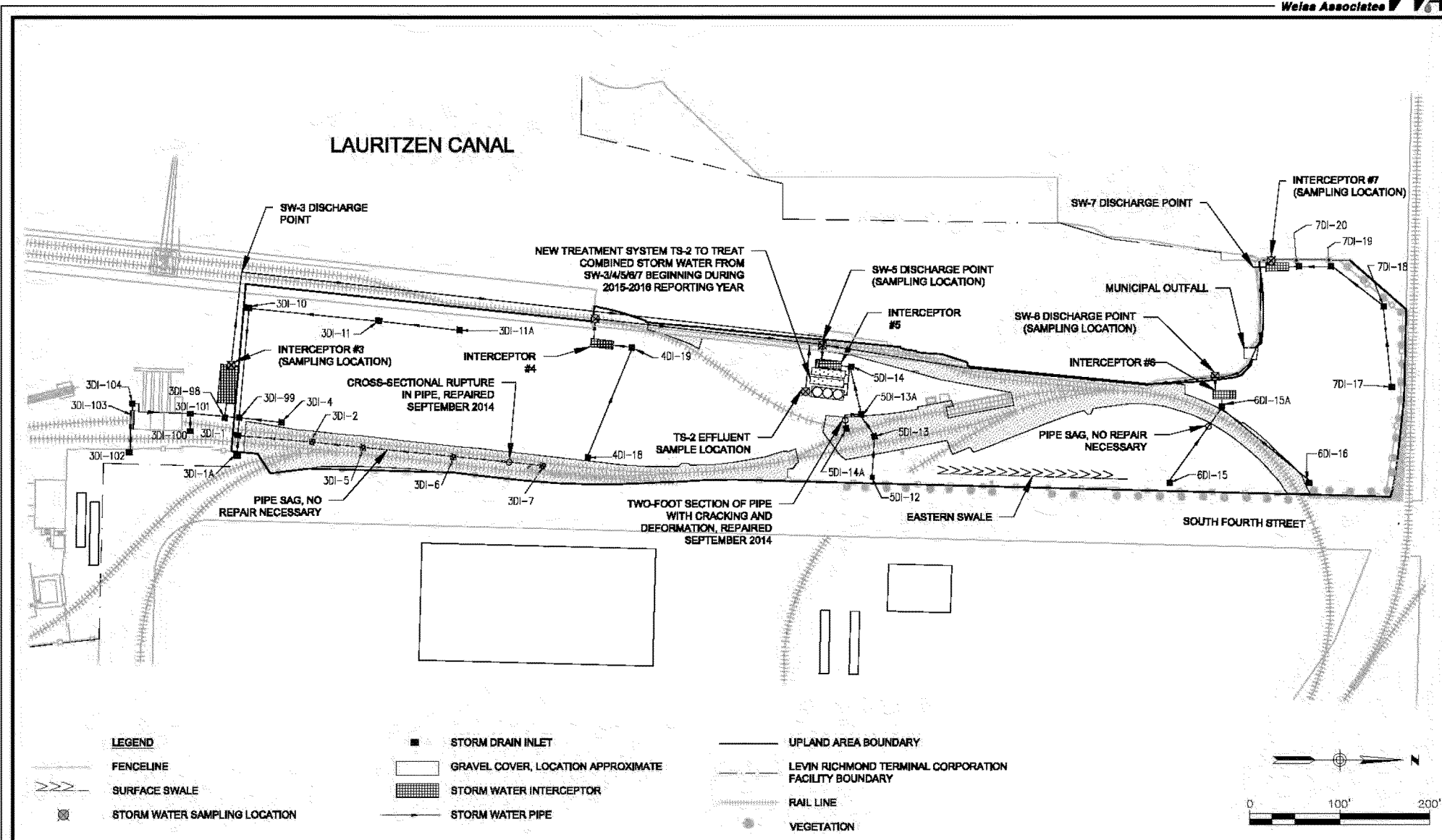


Figure 3. Upland Area Storm Water Collection System Inspection Results and Repairs, United Heckathorn Superfund Site, Richmond, California



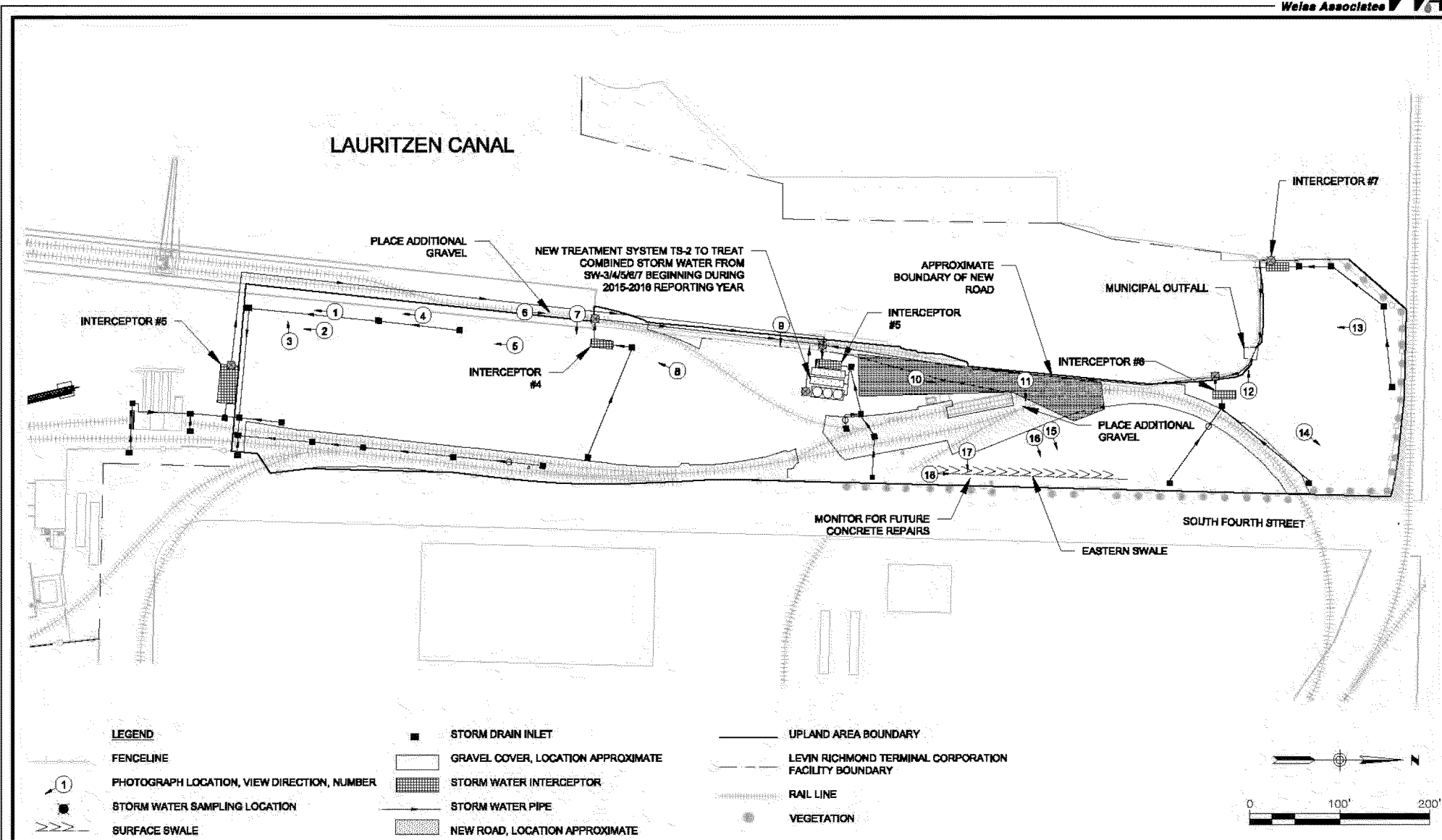


Figure 4. Upland Area Photo Locations and Maintenance Recommendations, United Hekstern Superfund Site, Richmond, California

## **TABLES**

Table 1. 2014-2015 Annual Storm Water Sampling Data for Pesticides, United Heckathorn Superfund Site, Richmond, California

Discharge Location	Notes	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	gamma-BHC (Lindane)	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
Sample Date		µg/L																				
SW-3																						
11/20/2014		<0.0019	<0.0019	<0.0019	<0.0019	<0.096	<0.0019	<0.096	<0.96	<0.096	<0.0019	<0.096	<0.096	<0.096	<0.0019	<0.096	<0.0019	<0.0019	0.0016	<0.0019	<0.096	<0.024
12/2/2014		0.0028	0.014	0.019	<0.0020	<0.097	<0.0020	<0.097	<0.97	<0.097	<0.0020	<0.097	<0.097	<0.097	<0.0020	<0.097	<0.0020	<0.0020	<0.0020	<0.0020	<0.097	<0.025
12/2/2014	Duplicate	0.0025	0.014	0.019	<0.0019	<0.097	<0.0019	<0.097	<0.97	<0.097	<0.0019	<0.097	<0.097	<0.097	<0.0019	<0.097	<0.0019	<0.0019	<0.0019	<0.0019	<0.097	<0.024
12/11/2014		0.0023	<0.0022	0.039	<0.0022	<0.095	<0.0022	<0.095	<0.95	<0.095	<0.0022	0.030	<0.095	<0.095	<0.0022	<0.095	<0.0022	<0.0022	<0.0022	<0.0022	<0.095	<0.027
SW-4/5/6/7																						
11/20/2014		<0.0019	<0.0019	0.020	<0.0019	<0.096	<0.0019	<0.096	<0.96	<0.096	<0.0019	0.042	<0.096	<0.096	0.011	<0.096	<0.0019	<0.0019	<0.0019	<0.0019	<0.096	<0.024
11/20/2014	Duplicate	<0.0019	<0.0019	0.022	<0.0019	<0.10	<0.0019	<0.10	<1.0	<0.10	<0.0019	0.039	<0.10	<0.10	0.012	<0.10	<0.0019	<0.0019	<0.0019	<0.0019	<0.10	<0.024
12/2/2014		<0.0019	<0.0019	0.0035	<0.0019	<0.096	<0.0019	<0.096	<0.96	<0.096	<0.0019	<0.096	<0.096	<0.096	<0.0019	<0.096	<0.0019	<0.0019	<0.0019	<0.0019	<0.096	<0.024
12/11/2014		0.0033	<0.0019	0.0049	<0.0019	<0.095	<0.0019	<0.095	<0.95	<0.095	<0.0019	<0.095	<0.095	<0.095	<0.0019	<0.095	<0.0019	<0.0019	<0.0019	<0.0019	<0.095	<0.024
Final Remediation Level <sup>a</sup>		0.00059										0.00014										

**Notes:**

Data presented is from 2014-2015 storm water sampling events.

Detected concentrations are displayed in **bold**.

<sup>a</sup>Based on USEPA Superfund Record of Decision: United Heckathorn Co., October 1994, for surface waters in the Lauritzen, Santa Fe, and lower Richmond Inner Harbor Channels.

**Acronyms/Abbreviations:**

J - concentration reported is an estimated value

TPH - total petroleum hydrocarbons

µg/L - micrograms per liter

USEPA - United States Environmental Protection Agency

<n - not detected above the reporting limit

--- - not analyzed

Table 2. 2014-2015 Annual Storm Water Sampling Data for General Parameters and Metals, United Heckathorn Superfund Site, Richmond, California

Discharge Location / Sample Date	Notes	pH	Specific Conductance µmhos/cm	Total Oil and Grease mg/L	Total Suspended Solids mg/L	Aluminum µg/L	Copper µg/L	Iron µg/L	Lead µg/L	Nickel µg/L	Zinc µg/L
<b>SW-3</b>											
11/20/2014		6.92	3,500	<5.6	190	1,300	14	J 2,600	9.6	J 6.5	J 210
12/2/2014		7.31	890	<6.6	120	950	7.6	2,100	7.7	3.3	100
12/2/2014	Duplicate	7.31	900	<5.2	120	1,000	7.4	2,100	7.6	3.2	100
12/11/2014		7.82	3,100	2.5	J 280	2,700	13	3,700	10	5.5	J 170
<b>SW-4/5/6/7</b>											
11/20/2014		7.71	230	<5.5	10	160	26	670	11	4.9	400
11/20/2014	Duplicate	7.71	230	<5.5	9.0	190	27	700	12	5.0	410
12/2/2014		6.80	220	<5.2	79	830	8.9	1,300	7.5	2.9	J 96
12/11/2014		7.61	540	1.2	J 20	480	J 5.7	430	1.9	J <15	91

**Acronyms/Abbreviations:**

J - concentration reported is an estimated value

mg/L - milligrams per liter

µg/L - micrograms per liter

µmhos/cm - microsiemens per centimeter

--- - not analyzed

<n - not detected above the reporting limit

Table 3. Waste Characterization Sample Results, United Heckathorn Superfund Site, Richmond, California

	Regulatory Thresholds			SW-4 and SW-5 Solid Waste 6/25/2014	SW-4 and SW-5 Solid Waste Extract 6/25/2014		SW-3, SW-6, and SW-7 Solid Waste 9/5/2014
	TTLc	TCLP	STLC	Result <sup>a</sup>	TCLP Result	STLC Result	Result <sup>a</sup>
<b>Fish Toxicity</b>							
96 Hour Acute Toxicity	-	-	-	PASS	-	-	-
<b>Volatiles</b>				µg/kg			µg/kg
Benzene	-	500	-	<5.0	-	-	-
Ethylbenzene	-	-	-	<5.0	-	-	-
Toluene	-	-	-	<5.0	-	-	-
Xylenes, total	-	-	-	<9.9	-	-	-
<b>TPH</b>				mg/kg			mg/kg
TPH-G	-	-	-	<0.250	-	-	-
TPH-D	-	-	-	770	-	-	-
TPH-MO	-	-	-	3,100	-	-	-
<b>Pesticides</b>				µg/kg			µg/kg
Aldrin	1,400	-	140	<1.9	-	-	<1.9
Chlordane	2,500	30	250	<39	-	-	<39
4,4-DDT	1,000 <sup>b</sup>	-	100 <sup>b</sup>	290	-	-	7.8
4,4-DDE	1,000 <sup>b</sup>	-	100 <sup>b</sup>	190	-	-	11
4,4-DDD	1,000 <sup>b</sup>	-	100 <sup>b</sup>	290	-	-	26
Total DDT	1,000 <sup>b</sup>	-	100 <sup>b</sup>	770	-	-	44.8
Dieldrin	8,000	-	800	25	-	-	<1.9
Endrin	200	20	20	<1.9	-	-	<1.9
Heptachlor	4,700	8	470	<1.9	-	-	<1.9
Methoxychlor	100,000	10000	10,000	<1.9	-	-	<1.9
<b>Metals</b>				mg/kg	mg/L		mg/kg
Antimony	500	NE	15	<1.8	-	-	<2.1
Arsenic	500	5.0	5.0	5.0	-	-	4.6
Barium	10,000	100	100	130	-	-	160
Beryllium	75	NE	0.75	<0.35	-	-	1.60
Cadmium	100	1.0	1.0	1.8	-	-	0.89
Chromium	2,500	5	5	44	-	-	26
Cobalt	8,000	NE	80	11	-	-	18
Copper	2,500	NE	25	88	-	-	28
Lead	1,000	5.0	5.0	<b>180</b>	<0.050	<b>8.2</b>	22
Mercury	20	0.2	0.2	0.59	-	-	0.11
Molybdenum	3,500	NE	350	5.1	-	-	<2.1
Nickel	2,000	NE	20	98	-	-	74
Selenium	100	1.0	1.0	<3.5	-	-	<4.3
Silver	500	5	5	<0.88	-	-	<1.1

Table 3. Waste Characterization Sample Results, United Heckathorn Superfund Site, Richmond, California

	Regulatory Thresholds			SW-4 and SW-5 Solid Waste 6/25/2014	SW-4 and SW-5 Solid Waste Extract 6/25/2014		SW-3, SW-6, and SW-7 Solid Waste 9/5/2014
	TTLC	TCLP	STLC	Result <sup>a</sup>	TCLP Result	STLC Result	Result <sup>a</sup>
<b>Metals (cont.)</b>				<b>mg/kg</b>	<b>mg/L</b>		<b>mg/kg</b>
Thallium	700	NE	7.0	<1.8	-	-	<2.1
Vanadium	2,400	NE	24	84	-	-	150
Zinc	5,000	NE	250	640	-	-	160

**Notes:**

**Bold** values represent waste constituent concentrations exceeding one or more of the toxicity threshold concentrations for the constituent.

<sup>a</sup> Analytical results provided are wet basis concentrations.

<sup>b</sup> The STLC and TTLC values of 100 and 1,000 µg/kg, respectively, are for total DDT (sum of DDT, DDE, and DDD concentrations).

**Abbreviations:**

4,4-DDD - 4,4-dichlorodiphenyldichloroethane

4,4-DDE - 4,4-dichlorodiphenldichloroethene

4,4-DDT - 4,4-dichlorophenyltrichloroethane

mg/kg - milligrams per kilogram

mg/L - milligrams per liter

NE - not established

STLC - Soluble Threshold Limit Concentration per Table II- List of Inorganic Persistent and Bioaccumulative Toxic Substances and their Soluble Threshold Limit Concentration (STLC) and Total Threshold Limit Concentration (TTLC) Values (Title 22, California Code of Regulations, §66261.24)

TCLP - Toxicity Characteristic Leaching Procedure maximum concentration for toxicity per Table 1- *Maximum Concentration of Contaminants for the Toxicity Characteristic* (Title 40 Code of Federal Regulations, §261.24)

TPH-D - total petroleum hydrocarbons as diesel

TPH-G - total petroleum hydrocarbons as gasoline

TPH-MO - total petroleum hydrocarbon as motor oil

TTLC - Total Threshold Limit Concentration per Table II- List of Inorganic Persistent and Bioaccumulative Toxic Substances and their Soluble Threshold Limit Concentration (STLC) and Total Threshold Limit Concentration (TTLC) Values (Title 22, California Code of Regulations, §66261.24)

µg/kg - micrograms per kilogram

USEPA - United States Environmental Protection Agency

--- - not analyzed

<n - not detected above the reporting limit

Table 4. Proposed Site Work for 2015-2016, United Heckathorn Superfund Site, Richmond, California

Aspect	Description	Anticipated Completion Date
General	Implement all activities (i.e., cap maintenance, storm water monitoring, interceptor cleanout) described in the O&M Plan. <sup>1</sup>	Continuously
	Submit report of O&M performed for the period of July 1, 2015 to June 30, 2016.	On/around July 15, 2016
Concrete Cap	Perform 2015-2016 annual inspection of the cap under oversight of a registered engineer.	June 1, 2016
	Monitor deteriorated concrete in the southern portion of the eastern swale of the Main Terminal identified in Photos 17 and 18 (Appendix A); replace affected sections should evidence of underlying soil be observed.	Continuously
	Monitor identified cracks, seals, and joints for signs of propagation and/or degradation throughout upland capping system.	Continuously
Gravel Cover	Add gravel to the interceptor SW-4 and SW-5 areas identified in Photos 7 and 11 (Appendix A) to ensure proper coverage.	October 1, 2015
	Monitor the gravel cover throughout the Upland Area for signs of thinning or ground exposure.	Continuously
Storm Water System	Install storm water treatment at the SW-5 discharge location to treat combined storm water pumped from interceptors SW-3, SW-4, SW-5, SW-6, and SW-7 using flocculation, settling, and filtration methods.	October 1, 2015
	Continue developing trend graphs showing temporary and spatial distribution of detected pesticides for the preceding five years.	July 15, 2016

<sup>1</sup> Revised Draft Operations and Maintenance Plan, Upland Capping System, Former United Heckathorn Site, PES Environmental, Inc., March 1999.

## **APPENDIX A**

### **UPLAND CAPPING SYSTEM INSPECTION PHOTOGRAPHS**



## Appendix A

### Upland Capping System Inspection Photographs

2014-2015 Annual Report, United Heckathorn Superfund Site

Richmond, California

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Photo 1 – Looking south along western alley of secondary storage area: surficial cracking in SW-3 area, with sealed crack in foreground.



Photo 2 – Looking south along western alley of secondary storage area: sealed surficial cracks at concrete seam.

## Appendix A

### Upland Capping System Inspection Photographs

2014-2015 Annual Report, United Heckathorn Superfund Site  
Richmond, California

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Photo 3 – Looking west across western alley of secondary storage area: surficial cracking in SW-3 area.



Photo 4 – Looking south along western alley of secondary storage area: surficial cracking near drain inlet 3DI-11.



## Appendix A

### Upland Capping System Inspection Photographs

2014-2015 Annual Report, United Heckathorn Superfund Site

Richmond, California

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Photo 5 - Looking south toward drain inlet 3DI-11A: areas of surficial cracking and concrete seam.

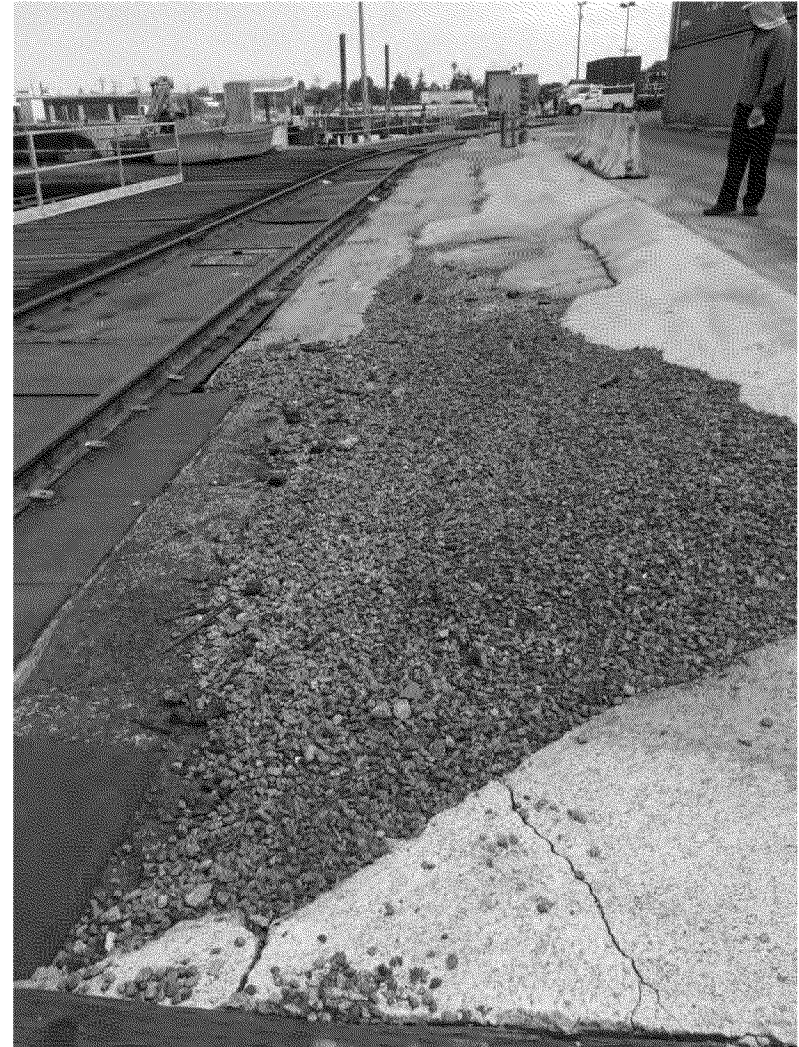


Photo 6 – Looking north, surficial cracks and areas with sparse gravel coverage; area will be modified to have combination of gravel and concrete cap.

## Appendix A

### Upland Capping System Inspection Photographs

2014-2015 Annual Report, United Heckathorn Superfund Site

Richmond, California

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Photo 7 – Looking east from corner of interceptor SW-4: crack extending east with sealant added in December 2013.



Photo 8 – Looking southwest toward 4DI-19: surficial cracks. sealant added in December 2013.



**Appendix A**  
**Upland Capping System Inspection Photographs**  
2014-2015 Annual Report, United Heckathorn Superfund Site  
Richmond, California

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Photo 9 - Looking east: surficial cracks.



Photo 10 - Looking north: gravel cover.

## Appendix A

### Upland Capping System Inspection Photographs

2014-2015 Annual Report, United Heckathorn Superfund Site

Richmond, California

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Photo 11 – Looking east: surficial cracks.



Photo 12 – Looking west toward Municipal Outfall: seams and surficial cracks.



## Appendix A

### Upland Capping System Inspection Photographs

2014-2015 Annual Report, United Heckathorn Superfund Site

Richmond, California

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Photo 13 - Northwest corner of site, looking south near interceptor SW-7: minor surface cracks noted.



Photo 14 - Northeast corner of site: minor surface cracks.

## Appendix A

### Upland Capping System Inspection Photographs

2014-2015 Annual Report, United Heckathorn Superfund Site

Richmond, California

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Photo 15- Area southeast of interceptor SW-6: minor surface cracks.



Photo 16 – Area southeast of interceptor SW-6: minor surface cracks.



## Appendix A

### Upland Capping System Inspection Photographs

2014-2015 Annual Report, United Heckathorn Superfund Site

Richmond, California

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Photo 17 – Looking east, north of 5DI-14A: areas of minor concrete deterioration.



Photo 18 – Looking east, north of 5DI-14A: areas of minor concrete deterioration.

## **APPENDIX B**

### **2014-2015 ANNUAL STORM WATER MONITORING REPORT**



LEVIN RICHMOND TERMINAL CORPORATION  
402 WRIGHT AVENUE  
RICHMOND, CA 94804  
(510) 232-4422 FAX (510) 236-1827

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June 30, 2015

Regional Water Quality Control Board—San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, California 94612

RE: *2014-2015 Annual Report for Storm Water Discharges Associated with Industrial Activities*  
Levin Richmond Terminal Corporation  
WDID No.: 2 07I002394

Dear Mr. Pham:

Enclosed please find the *2014-2015 Annual Report for Storm Water Discharges Associated with Industrial Activities* presenting storm water monitoring data and observations related to storm water compliance activities at the Levin Richmond Terminal Facility, located at 402 Wright Avenue, Richmond, California. Storm water compliance activities were conducted under the requirements of the *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities* specified in the State Water Resources Control Board (SWRCB) Water Quality Order No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 (*Industrial General Permit*).

Please feel free to contact me if you have any questions or concerns with the attached report.

Sincerely,

Gary Levin  
Chief Executive Officer  
(510) 307-4091

Attachment A. 2014-2015 Annual Report for Storm Water Discharges Associated with Industrial Activities  
Attachment B. 2014-2015 Annual Report for Storm Water Discharges Associated with Industrial Activities - Additional Explanations  
Attachment C. Analytical Data  
Table 1. 2014-2015 Annual Storm Water Sampling Data for General Parameters and Metals  
Table 2. 2014-2015 Annual Storm Water Sampling Data for Detected Pesticides  
2014-2015 Laboratory Analytical Reports

## **ATTACHMENT A**

### **2014-2015 ANNUAL REPORT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES**

**2014-2015 ANNUAL REPORT FOR STORM WATER  
DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES**

**for**

**Levin Richmond Terminal Corporation  
WDID No.: 2 07I002394**

*Prepared for*

**Regional Water Quality Control Board – San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, California 94612**

June 30, 2015

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD  
**2014-2015 ANNUAL REPORT**  
FOR STORM WATER DISCHARGES ASSOCIATED  
WITH INDUSTRIAL ACTIVITIES

Reporting Period July 1, 2014 through June 30, 2015

**An Annual Report is required to be submitted to your local Regional Water Quality Control Board (Regional Board) by July 1 of each year.** This document must be certified and signed, under penalty of perjury, by the appropriate official of your company. Many of the Annual Report questions require an explanation. Please provide explanations on a separate sheet as an attachment. **Retain a copy of the completed Annual Report for your records.**

Please circle or highlight any information contained in Items A, B, and C below that is new or revised so we can update our records. Please remember that a Notice of Termination and new Notice of Intent are required whenever a facility operation is relocated or changes ownership.

If you have any questions, please contact your Regional Board Industrial Storm Water Permit Contact. The names, telephone numbers, and e-mail addresses of the Regional Board contacts, as well as the Regional Board Offices addresses are indicated below.

**REGIONAL BOARD INFORMATION:**

NAME OF REGIONAL BOARD  
ADDRESS  
CITY AND STATE ZIP

TELEPHONE NUMBER  
FACILITY CONTACT NAME  
FACILITY CONTACT ADDRESS

**GENERAL INFORMATION**

**A. Facility Information:**

NAME OF FACILITY  
FACILITY ADDRESS  
CITY AND STATE ZIP

TELEPHONE NUMBER  
FACILITY NAME  
FACILITY ADDRESS

**WDID NO: 2 071002394**

SIC Code(s):

**4491**      FACILITY TYPE

**B. Facility Operator Information:**

NAME OF OPERATOR  
FACILITY ADDRESS  
CITY AND STATE ZIP

TELEPHONE NUMBER  
FACILITY NAME  
FACILITY ADDRESS

**C. Facility Billing Information:**

NAME OF BILLING PARTY  
FACILITY ADDRESS  
CITY AND STATE ZIP

TELEPHONE NUMBER  
FACILITY NAME  
FACILITY ADDRESS

DATE OF REPORT      FACILITY TYPE      FACILITY ADDRESS

# SPECIFIC INFORMATION

SECTION 4.0

SECTION 4.0

SECTION 4.0

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The `get` method returns the value of the property if it exists, otherwise it returns `undefined`.  
 The `set` method sets the value of the property to the value passed as an argument.

Figure 1 illustrates the experimental design. It shows a sequence of events: a fixation cross, a stimulus (a 3x3 grid of squares), a response (a 3x3 grid of squares), and a feedback (a 3x3 grid of squares). The stimulus and response grids are labeled 'Stimulus' and 'Response' respectively. The feedback grid is labeled 'Feedback'. The sequence is shown for two conditions: 'Correct' and 'Incorrect'.

[illegible]

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The diagram shows a large rectangle divided into four smaller rectangles by a vertical line and a horizontal line. The top-left rectangle is labeled 'a' and the bottom-right rectangle is labeled 'b'.

Figure 1. The structure of the proposed model. The input layer consists of 10 nodes representing the input features. The hidden layer consists of 10 nodes representing the hidden features. The output layer consists of 10 nodes representing the output features. The model is trained using a supervised learning algorithm.

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The diagram illustrates the experimental setup. A participant is seated at a table, looking at a computer screen. The screen displays a sequence of stimuli: a fixation cross, a target stimulus, and a distractor stimulus. The participant's response is recorded via a button press.





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**(c)** The Board shall have the authority to suspend or terminate the employment of any employee who has been convicted of a crime involving moral turpitude.

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1. The first part of the document is a header section containing the title "THE FIRST PART OF THE DOCUMENT IS A HEADER SECTION" and the subtitle "CONTAINING THE TITLE 'THE FIRST PART OF THE DOCUMENT IS A HEADER SECTION'".

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1. 本報告係根據「證券交易法」第36條之規定，由本公司董事會編製，除提供股東外，並應提供社會大眾，以資參考。  
 2. 本報告係根據「證券交易法」第36條之規定，由本公司董事會編製，除提供股東外，並應提供社會大眾，以資參考。  
 3. 本報告係根據「證券交易法」第36條之規定，由本公司董事會編製，除提供股東外，並應提供社會大眾，以資參考。

1. 2019年12月31日，公司总资产为1,000,000,000.00元，净资产为500,000,000.00元，营业收入为1,200,000,000.00元，净利润为100,000,000.00元。















[illegible]

1. 本報告係根據本會所屬之「國家發展委員會」及「國家安全委員會」之資料，並參考其他公開資料，進行分析與研究。  
 2. 本報告之內容，係根據本會所屬之「國家發展委員會」及「國家安全委員會」之資料，並參考其他公開資料，進行分析與研究。  
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 4. 本報告之內容，係根據本會所屬之「國家發展委員會」及「國家安全委員會」之資料，並參考其他公開資料，進行分析與研究。  
 5. 本報告之內容，係根據本會所屬之「國家發展委員會」及「國家安全委員會」之資料，並參考其他公開資料，進行分析與研究。  
 6. 本報告之內容，係根據本會所屬之「國家發展委員會」及「國家安全委員會」之資料，並參考其他公開資料，進行分析與研究。  
 7. 本報告之內容，係根據本會所屬之「國家發展委員會」及「國家安全委員會」之資料，並參考其他公開資料，進行分析與研究。  
 8. 本報告之內容，係根據本會所屬之「國家發展委員會」及「國家安全委員會」之資料，並參考其他公開資料，進行分析與研究。  
 9. 本報告之內容，係根據本會所屬之「國家發展委員會」及「國家安全委員會」之資料，並參考其他公開資料，進行分析與研究。  
 10. 本報告之內容，係根據本會所屬之「國家發展委員會」及「國家安全委員會」之資料，並參考其他公開資料，進行分析與研究。

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1. Umsatzsteuer (USt) ist eine Steuer auf den Umsatz von Waren und Dienstleistungen. Sie wird vom Verkäufer an den Staat gezahlt und vom Käufer an den Verkäufer.

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**QUESTION**      **ANSWER**

1. 本報告係根據本公司及子公司於民國109年12月31日止之財務資料編製，其內容與本公司及子公司之財務報表無異。  
 2. 本報告係根據本公司及子公司於民國109年12月31日止之財務資料編製，其內容與本公司及子公司之財務報表無異。  
 3. 本報告係根據本公司及子公司於民國109年12月31日止之財務資料編製，其內容與本公司及子公司之財務報表無異。  
 4. 本報告係根據本公司及子公司於民國109年12月31日止之財務資料編製，其內容與本公司及子公司之財務報表無異。  
 5. 本報告係根據本公司及子公司於民國109年12月31日止之財務資料編製，其內容與本公司及子公司之財務報表無異。  
 6. 本報告係根據本公司及子公司於民國109年12月31日止之財務資料編製，其內容與本公司及子公司之財務報表無異。  
 7. 本報告係根據本公司及子公司於民國109年12月31日止之財務資料編製，其內容與本公司及子公司之財務報表無異。  
 8. 本報告係根據本公司及子公司於民國109年12月31日止之財務資料編製，其內容與本公司及子公司之財務報表無異。  
 9. 本報告係根據本公司及子公司於民國109年12月31日止之財務資料編製，其內容與本公司及子公司之財務報表無異。  
 10. 本報告係根據本公司及子公司於民國109年12月31日止之財務資料編製，其內容與本公司及子公司之財務報表無異。

1. 2019. gada 1. ceturksnī, salīdzinot ar 2018. gada 1. ceturksni, kopējais iedzīvotāju skaits, kas dzīvo dzīvokļos, ir samazinājies par 1,4 tūkšiem cilvēku, kas ir 0,02% no kopējā iedzīvotāju skaita.

1. 本報告係根據「個人資料保護法」及「個人資料保護法施行細則」之規定，就本公司蒐集、處理及利用個人資料之情形，向社會大眾公開說明，以保障個人資料之安全及隱私。

Figure 1 illustrates the four types of nested rectangles. The grid shows the following configurations:

- Row 1 (Type 1):**
  - Type 1: Outer solid, inner solid.
  - Type 2: Outer solid, inner dashed.
  - Type 3: Outer dashed, inner solid.
  - Type 4: Outer dashed, inner dashed.
- Row 2 (Type 2):**
  - Type 1: Outer solid, inner solid.
  - Type 2: Outer solid, inner dashed.
  - Type 3: Outer dashed, inner solid.
  - Type 4: Outer dashed, inner dashed.
- Row 3 (Type 3):**
  - Type 1: Outer solid, inner solid.
  - Type 2: Outer solid, inner dashed.
  - Type 3: Outer dashed, inner solid.
  - Type 4: Outer dashed, inner dashed.
- Row 4 (Type 4):**
  - Type 1: Outer solid, inner solid.
  - Type 2: Outer solid, inner dashed.
  - Type 3: Outer dashed, inner solid.
  - Type 4: Outer dashed, inner dashed.

[illegible]

1. 本報告係根據本公司及子公司於民國103年1月1日至12月31日止之財務資料編製，除特別註明外，係以新台幣表達。  
 2. 本報告係根據本公司及子公司之會計帳簿及記錄編製，除特別註明外，係以新台幣表達。  
 3. 本報告係根據本公司及子公司之會計帳簿及記錄編製，除特別註明外，係以新台幣表達。  
 4. 本報告係根據本公司及子公司之會計帳簿及記錄編製，除特別註明外，係以新台幣表達。

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1. 2019 年 12 月 31 日，本公司 2019 年度股东大会审议通过《关于 2019 年度利润分配预案的议案》，以 2019 年 12 月 31 日总股本 100,000,000 股为基数，向全体股东每 10 股派发现金股利人民币 1.00 元（含税），共计派发现金股利人民币 10,000,000.00 元。

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## ATTACHMENT SUMMARY

Answer the questions below to help you determine what should be attached to this annual report. Answer NA (Not Applicable) to questions 2-4 if you are not required to provide those attachments.

1. Have you attached Forms 1,2,3,4, and 5 or their equivalent? ☒ YES (Mandatory)
2. If you conducted sampling and analysis, have you attached the laboratory analytical reports? ☒ YES ☐ NO ☐ NA
3. If you checked box II, III, IV, or V in item D.2 of this Annual Report, have you attached the first page of the appropriate certifications? ☐ YES ☐ NO ☒ NA
4. Have you attached an explanation for each "NO" answer in items E.1, E.2, E.5-E.7, E.9, E.10.c, F.1.b, F.2.a, F.2.c, G.1, H.1-H.7, or J? ☒ YES ☐ NO ☐ NA

## ANNUAL REPORT CERTIFICATION

I am duly authorized to sign reports required by the INDUSTRIAL ACTIVITIES STORM WATER GENERAL PERMIT (see Standard Provision C.9) and I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those person directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: GARY LEVIN  
Signature: Gary Levin Date: 6/30/2015  
Title: CEO

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A row of 20 rectangular blocks. The first 10 blocks are white, and the next 10 blocks are shaded gray. This represents the number 10.

-  Mary Cunningham  Senior Staff Engineer 

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\*\*Estimate; exact discharge start time unknown.

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- 1. 2019 年 12 月 31 日，甲公司“应付账款”科目贷方余额为 200 万元，其中 180 万元系欠乙公司的账款，20 万元系欠丙公司的账款。2020 年 1 月 1 日，甲公司开始与乙公司进行债务重组谈判。2020 年 2 月 1 日，甲公司与乙公司达成债务重组协议，约定甲公司以其持有的乙公司 10% 的股权抵偿 180 万元的应付账款。2020 年 2 月 10 日，甲公司取得乙公司 10% 的股权，当日公允价值为 180 万元。2020 年 2 月 1 日，甲公司与丙公司达成债务重组协议，约定甲公司以其持有的丙公司 5% 的股权抵偿 20 万元的应付账款。2020 年 2 月 10 日，甲公司取得丙公司 5% 的股权，当日公允价值为 20 万元。2020 年 2 月 10 日，甲公司取得乙公司 10% 的股权，当日公允价值为 180 万元。2020 年 2 月 10 日，甲公司取得丙公司 5% 的股权，当日公允价值为 20 万元。
- 2. 2019 年 12 月 31 日，甲公司“应付账款”科目贷方余额为 200 万元，其中 180 万元系欠乙公司的账款，20 万元系欠丙公司的账款。2020 年 1 月 1 日，甲公司开始与乙公司进行债务重组谈判。2020 年 2 月 1 日，甲公司与乙公司达成债务重组协议，约定甲公司以其持有的乙公司 10% 的股权抵偿 180 万元的应付账款。2020 年 2 月 10 日，甲公司取得乙公司 10% 的股权，当日公允价值为 180 万元。2020 年 2 月 1 日，甲公司与丙公司达成债务重组协议，约定甲公司以其持有的丙公司 5% 的股权抵偿 20 万元的应付账款。2020 年 2 月 10 日，甲公司取得丙公司 5% 的股权，当日公允价值为 20 万元。2020 年 2 月 10 日，甲公司取得乙公司 10% 的股权，当日公允价值为 180 万元。2020 年 2 月 10 日，甲公司取得丙公司 5% 的股权，当日公允价值为 20 万元。
- 3. 2019 年 12 月 31 日，甲公司“应付账款”科目贷方余额为 200 万元，其中 180 万元系欠乙公司的账款，20 万元系欠丙公司的账款。2020 年 1 月 1 日，甲公司开始与乙公司进行债务重组谈判。2020 年 2 月 1 日，甲公司与乙公司达成债务重组协议，约定甲公司以其持有的乙公司 10% 的股权抵偿 180 万元的应付账款。2020 年 2 月 10 日，甲公司取得乙公司 10% 的股权，当日公允价值为 180 万元。2020 年 2 月 1 日，甲公司与丙公司达成债务重组协议，约定甲公司以其持有的丙公司 5% 的股权抵偿 20 万元的应付账款。2020 年 2 月 10 日，甲公司取得丙公司 5% 的股权，当日公允价值为 20 万元。2020 年 2 月 10 日，甲公司取得乙公司 10% 的股权，当日公允价值为 180 万元。2020 年 2 月 10 日，甲公司取得丙公司 5% 的股权，当日公允价值为 20 万元。

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ED\_000946\_00000047-00057

- 1. 2019 年 12 月 31 日，甲公司“应付账款”科目贷方余额为 200 万元，其中 180 万元为 2019 年 12 月 31 日新形成的应付账款；2019 年 12 月 31 日，甲公司“应付账款”科目借方余额为 20 万元，其中 10 万元为 2019 年 12 月 31 日新形成的应付账款。
- 2. 2019 年 12 月 31 日，甲公司“应付账款”科目贷方余额为 200 万元，其中 180 万元为 2019 年 12 月 31 日新形成的应付账款；2019 年 12 月 31 日，甲公司“应付账款”科目借方余额为 20 万元，其中 10 万元为 2019 年 12 月 31 日新形成的应付账款。
- 3. 2019 年 12 月 31 日，甲公司“应付账款”科目贷方余额为 200 万元，其中 180 万元为 2019 年 12 月 31 日新形成的应付账款；2019 年 12 月 31 日，甲公司“应付账款”科目借方余额为 20 万元，其中 10 万元为 2019 年 12 月 31 日新形成的应付账款。

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ED\_000946\_00000047-00058



- 1. 2019 年 12 月 31 日，甲公司“应付账款”科目贷方余额为 200 万元，其中 180 万元为 2019 年 12 月 31 日新形成的应付账款，20 万元为 2018 年 12 月 31 日形成的应付账款。2020 年 1 月 1 日，甲公司“应付账款”科目贷方余额为 190 万元，其中 170 万元为 2020 年 1 月 1 日新形成的应付账款，20 万元为 2019 年 12 月 31 日形成的应付账款。2020 年 1 月 1 日，甲公司“应付账款”科目贷方余额为 190 万元，其中 170 万元为 2020 年 1 月 1 日新形成的应付账款，20 万元为 2019 年 12 月 31 日形成的应付账款。2020 年 1 月 1 日，甲公司“应付账款”科目贷方余额为 190 万元，其中 170 万元为 2020 年 1 月 1 日新形成的应付账款，20 万元为 2019 年 12 月 31 日形成的应付账款。
- 2. 2019 年 12 月 31 日，甲公司“应付账款”科目贷方余额为 200 万元，其中 180 万元为 2019 年 12 月 31 日新形成的应付账款，20 万元为 2018 年 12 月 31 日形成的应付账款。2020 年 1 月 1 日，甲公司“应付账款”科目贷方余额为 190 万元，其中 170 万元为 2020 年 1 月 1 日新形成的应付账款，20 万元为 2019 年 12 月 31 日形成的应付账款。2020 年 1 月 1 日，甲公司“应付账款”科目贷方余额为 190 万元，其中 170 万元为 2020 年 1 月 1 日新形成的应付账款，20 万元为 2019 年 12 月 31 日形成的应付账款。2020 年 1 月 1 日，甲公司“应付账款”科目贷方余额为 190 万元，其中 170 万元为 2020 年 1 月 1 日新形成的应付账款，20 万元为 2019 年 12 月 31 日形成的应付账款。

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TOC - Total Organic Carbon      J - estimated concentration

- 1. 2019 年 1 月 1 日起, 企业发生的符合条件的广告费和业务宣传费支出, 不超过当年销售(营业)收入 15% 的部分, 准予扣除; 超过部分, 准予在以后纳税年度结转扣除。
- 2. 企业发生的符合条件的广告费和业务宣传费支出, 不超过当年销售(营业)收入 15% 的部分, 准予扣除; 超过部分, 准予在以后纳税年度结转扣除。
- 3. 企业发生的符合条件的广告费和业务宣传费支出, 不超过当年销售(营业)收入 15% 的部分, 准予扣除; 超过部分, 准予在以后纳税年度结转扣除。
- 4. 企业发生的符合条件的广告费和业务宣传费支出, 不超过当年销售(营业)收入 15% 的部分, 准予扣除; 超过部分, 准予在以后纳税年度结转扣除。

[illegible]

J - estimated concentration

ED\_000946\_00000047-00060

- 1. 2019 年 12 月 31 日，甲公司“应付账款”科目贷方余额为 200 万元，其中 180 万元为 2019 年 12 月 31 日新形成的应付账款，20 万元为 2018 年 12 月 31 日形成的应付账款。2020 年 1 月 1 日，甲公司“应付账款”科目贷方余额为 190 万元，其中 170 万元为 2020 年 1 月 1 日新形成的应付账款，20 万元为 2019 年 12 月 31 日形成的应付账款。2020 年 1 月 1 日，甲公司“应付账款”科目贷方余额为 190 万元，其中 170 万元为 2020 年 1 月 1 日新形成的应付账款，20 万元为 2019 年 12 月 31 日形成的应付账款。2020 年 1 月 1 日，甲公司“应付账款”科目贷方余额为 190 万元，其中 170 万元为 2020 年 1 月 1 日新形成的应付账款，20 万元为 2019 年 12 月 31 日形成的应付账款。
- 2. 2019 年 12 月 31 日，甲公司“应付账款”科目贷方余额为 200 万元，其中 180 万元为 2019 年 12 月 31 日新形成的应付账款，20 万元为 2018 年 12 月 31 日形成的应付账款。2020 年 1 月 1 日，甲公司“应付账款”科目贷方余额为 190 万元，其中 170 万元为 2020 年 1 月 1 日新形成的应付账款，20 万元为 2019 年 12 月 31 日形成的应付账款。2020 年 1 月 1 日，甲公司“应付账款”科目贷方余额为 190 万元，其中 170 万元为 2020 年 1 月 1 日新形成的应付账款，20 万元为 2019 年 12 月 31 日形成的应付账款。2020 年 1 月 1 日，甲公司“应付账款”科目贷方余额为 190 万元，其中 170 万元为 2020 年 1 月 1 日新形成的应付账款，20 万元为 2019 年 12 月 31 日形成的应付账款。

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TOC - Total Organic Carbon      J - estimated concentration

Figure 1

- [illegible]

Figure 1


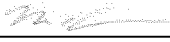


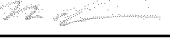


2014 - 2015



ANNUAL REPORT

FORM 4 - MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.  
- Visual observations must be conducted during the first hour of discharge at all discharge locations.  
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.  
- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.

- Make additional copies of this form as necessary.  
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

| Drainage Location Description: |   | SW-1  | SW-2                                      | TS1-E                       | SW-3                             | SW-4                             | SW-5                        | SW-6                        | SW-7                        | SW-4/5/6/7                  | SW-11                            | SW-12                            |
|--------------------------------|---|---|---|-----------------------------|----------------------------------|----------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------------------|----------------------------------|
| Observation Date:              | October 31, 2014  | Observation Time:   | --  | --                          | --                               | --                               | --                          | --                          | --                          | --                          | --                               | --                               |
| Observer's Name:               | Mary Cunningham   | Time Discharge Began:                                     | No discharge                              | No discharge                | No discharge                     | No discharge                     | No discharge                | No discharge                | No discharge                | No discharge                | No discharge                     | No discharge                     |
| Title:                         | Senior Staff Engineer   | Approximate storm start date and time:                    | No qualified storm event in October 2014. |                             |                                  |                                  |                             |                             |                             |                             |                                  |                                  |
| Signature:                     |    | Were Pollutants Observed (if yes, complete reverse side): | No  | No                          | No                               | No                               | No                          | No                          | No                          | No                          | No                               | No                               |
| Observations Date:             | November 20, 2014   | Observation Time:   | --  | --                          | 1:00 PM                          | 2:30 PM                          | --                          | --                          | --                          | 2:45 PM                     | 3:00 PM                          | 4:50 PM                          |
| Observer's Name:               | Mary Cunningham   | Time Discharge Began:                                     | No discharge <sup>(1)</sup>               | No discharge <sup>(1)</sup> | 1:55 PM                          | 2:35 PM                          | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | 1:30 PM                          | 1:30 PM                          |
| Title:                         | Senior Staff Engineer   | Approximate storm start date and time:                    | Evening of November 19, 2014.             |                             |                                  |                                  |                             |                             |                             |                             |                                  |                                  |
| Signature:                     |    | Were Pollutants Observed (if yes, complete reverse side): | No <sup>(1)</sup>                         | No <sup>(1)</sup>           | Yes                              | Yes                              | No <sup>(2)</sup>           | No <sup>(2)</sup>           | No <sup>(2)</sup>           | No <sup>(2)</sup>           | Yes                              | Yes                              |
| Observations Date:             | December 2, 2014  | Observation Time:   | --  | --                          | 12:20 PM                         | 11:40 AM                         | --                          | --                          | --                          | 11:30 AM                    | 10:55 AM                         | 1:00 PM                          |
| Observer's Name:               | Mary Cunningham   | Time Discharge Began:                                     | No discharge <sup>(1)</sup>               | No discharge <sup>(1)</sup> | Early AM, unknown <sup>(4)</sup> | Early AM, unknown <sup>(4)</sup> | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | Early AM, unknown <sup>(4)</sup> | Early AM, unknown <sup>(4)</sup> |
| Title:                         | Senior Staff Engineer   | Approximate storm start date and time:                    | Approximately 2 AM on December 2, 2014.   |                             |                                  |                                  |                             |                             |                             |                             |                                  |                                  |
| Signature:                     |    | Were Pollutants Observed (if yes, complete reverse side): | No <sup>(1)</sup>                         | No <sup>(1)</sup>           | Yes                              | Yes                              | No <sup>(2)</sup>           | No <sup>(2)</sup>           | No <sup>(2)</sup>           | No <sup>(2)</sup>           | Yes                              | Yes                              |
| Observations Date:             | December 11, 2014   | Observation Time:   | --  | --                          | 9:45 AM                          | 8:40 AM                          | --                          | --                          | --                          | 8:46 AM                     | 8:55 AM                          | 9:10 AM                          |
| Observer's Name:               | Mary Cunningham   | Time Discharge Began:                                     | No discharge <sup>(1)</sup>               | No discharge <sup>(1)</sup> | 8:50 AM                          | 8:40 AM                          | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | 8:40 AM                          | 8:40 AM                          |
| Title:                         | Senior Staff Engineer   | Approximate storm start date and time:                    | Early morning of December 11, 2014.       |                             |                                  |                                  |                             |                             |                             |                             |                                  |                                  |
| Signature:                     |    | Were Pollutants Observed (if yes, complete reverse side): | No <sup>(1)</sup>                         | No <sup>(1)</sup>           | Yes                              | Yes                              | No <sup>(2)</sup>           | No <sup>(2)</sup>           | No <sup>(2)</sup>           | No <sup>(2)</sup>           | Yes                              | Yes                              |
| Observations Date:             | January 31, 2015  | Observation Time:   | --  | --                          | --                               | --                               | --                          | --                          | --                          | --                          | --                               | --                               |
| Observer's Name:               | Mary Cunningham   | Time Discharge Began:                                     | No discharge                              | No discharge                | No discharge                     | No discharge                     | No discharge                | No discharge                | No discharge                | No discharge                | No discharge                     | No discharge                     |
| Title:                         | Senior Staff Engineer   | Approximate storm start date and time:                    | No qualified storm event in January 2015. |                             |                                  |                                  |                             |                             |                             |                             |                                  |                                  |
| Signature:                     |  | Were Pollutants Observed (if yes, complete reverse side): | No  | No                          | No                               | No                               | No                          | No                          | No                          | No                          | No                               | No                               |
| Observations Date:             | February 6, 2015  | Observation Time:   | --  | --                          | 1:50 PM                          | --                               | --                          | --                          | --                          | --                          | 2:15 PM                          | 2:05 PM                          |
| Observer's Name:               | Mary Cunningham   | Time Discharge Began:                                     | No discharge <sup>(1)</sup>               | No discharge <sup>(1)</sup> | 1:45 PM                          | No discharge                     | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | No discharge                     | 2:13 PM                          |
| Title:                         | Senior Staff Engineer   | Approximate storm start date and time:                    | Early morning of February 6, 2015.        |                             |                                  |                                  |                             |                             |                             |                             |                                  |                                  |
| Signature:                     |  | Were Pollutants Observed (if yes, complete reverse side): | No <sup>(1)</sup>                         | No <sup>(1)</sup>           | Yes                              | No                               | No <sup>(2)</sup>           | No <sup>(2)</sup>           | No <sup>(2)</sup>           | No <sup>(2)</sup>           | No                               | Yes                              |
| Observations Date:             | March 31, 2015  | Observation Time:   | --  | --                          | --                               | --                               | --                          | --                          | --                          | --                          | --                               | --                               |
| Observer's Name:               | Mary Cunningham   | Time Discharge Began:                                     | No discharge                              | No discharge                | No discharge                     | No discharge                     | No discharge                | No discharge                | No discharge                | No discharge                | No discharge                     | No discharge                     |
| Title:                         | Senior Staff Engineer   | Approximate storm start date and time:                    | No qualified storm event in March 2015.   |                             |                                  |                                  |                             |                             |                             |                             |                                  |                                  |
| Signature:                     |  | Were Pollutants Observed (if yes, complete reverse side): | No  | No                          | No                               | No                               | No                          | No                          | No                          | No                          | No                               | No                               |

|   |   |   |                                       |                             |                        |                             |                             |                             |                             |                          |              |              |
|---|---|---|---------------------------------------|-----------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|--------------------------|--------------|--------------|
| Observations Date:  | April 7, 2015   | Observation Time:   | --                                    | --                          | 9:10 AM                | --                          | --                          | --                          | --                          | 9:30 AM                  | 9:45 AM      | --           |
| Observer's Name:  | Mary Cunningham   | Time Discharge Began:                                     | No discharge <sup>(1)</sup>           | No discharge <sup>(1)</sup> | 6:40 AM <sup>(5)</sup> | No discharge <sup>(6)</sup> | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | No discharge <sup>(2)</sup> | 9:30 AM <sup>(6,7)</sup> | 9:45 AM      | No discharge |
| Title:  | Senior Staff Engineer   | Approximate storm start date and time:                    | Approximately 1 AM on April 7, 2015.  |                             |                        |                             |                             |                             |                             |                          |              |              |
| Signature:  |  | Were Pollutants Observed (if yes, complete reverse side): | No                                    | No                          | Yes                    | No                          | No                          | No                          | No                          | Yes                      | Yes          | No           |
| Observations Date:  | May 29, 2015  | Observation Time:   | --                                    | --                          | --                     | --                          | --                          | --                          | --                          | --                       | --           | --           |
| Observer's Name:  | Scott Bourne  | Time Discharge Began:                                     | No discharge                          | No discharge                | No discharge           | No discharge                | No discharge                | No discharge                | No discharge                | No discharge             | No discharge | No discharge |
| Title:  | Principal Engineer  | Approximate storm start date and time:                    | No qualified storm event in May 2015. |                             |                        |                             |                             |                             |                             |                          |              |              |
| Signature:  |  | Were Pollutants Observed (if yes, complete reverse side): | No                                    | No                          | No                     | No                          | No                          | No                          | No                          | No                       | No           | No           |
| <p>(1) Storm water from interceptors SW-1 and SW-2 routed to treatment system. See TS1-E for discharge from treatment system.</p> <p>(2) Storm water from interceptors SW-4, SW-5, SW-6, and SW-7 combined in sedimentation tank at SW-5 prior to discharge; see SW-4/5/6/7 for discharge information.</p> <p>(3) Sample collected from storage tank prior to outflow. Sample represents discharge.</p> <p>(4) Discharge began prior to business hours on December 2, 2014.</p> <p>(5) Exact start of discharge unknown. Operator started TS-1 treatment system at 0640 on 4/7/15.</p> <p>(6) Beginning in April 2015, discharge from interceptor SW-3 is routed to the combined sedimentation tank at SW-5. Discharge from the aboveground tank at SW-5 represents the combined discharge from SW-3 through SW-7.</p> <p>(7) The discharge valve from interceptor SW-5 was found to be leaking at 0920 on 4/7/15; exact start time of discharge unknown.</p> |   |   |                                       |                             |                        |                             |                             |                             |                             |                          |              |              |

| <b>2014 - 2015</b><br><b>ANNUAL REPORT</b><br><b>FORM 4 (continued) - MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES</b> |                            |                                |  |   |   |
|---|----------------------------|--------------------------------|--|---|---|
|   |                            | Drainage Location Description: | Describe Storm Water Discharge Characteristics<br>Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining, containing floating objects or an oil sheen, has odors, etc. | Identify and Describe Source(s) of Pollutants             | Describe any revised or new BMPs and their date of implementation   |
| Observation Date and Time:  | November 20, 2014, 1:00 PM | TS1-E                          | Discharge was tan with light turbidity. No solids, staining, odor, or sheen observed.  | Not identified  | Addition of biopolymer flocculant at treatment system TS-1 was implemented for the 2014-2015 storm season.<br><br>The following additional BMPs were implemented across the site:<br>-Updated site sweeping plan on/around 10/15/14.<br>-Installed and test global positioning system for sweepers on/around 10/15/14.<br>-Installed and test articulating head on single sweeping system to improve sweeping on rail track on/around 10/1/14.<br>-Installed second covered, telescoping conveyor with drip pans on/around 10/1/14.<br>-Established track out prevention zone and facility exits including rumble strip and delineated area on/around 10/1/14.<br>-Installed weather station with alarm to track precipitation, wind speed and other parameters on/around 12/31/14. |
| Observation Date and Time:  | November 20, 2014, 2:30 PM | SW-3                           | Discharge was dark gray/black, highly turbid, with some suspended solids. No staining, odor, or sheen observed.  | Bulk product storage in the SW-3 catchment area.          | Construction of treatment system TS-2 anticipated before 2015-2016 rainy season.  |
| Observation Date and Time:  | November 20, 2014, 2:45 PM | SW-4/5/6/7                     | Discharge was light gray/brown, lightly turbid, and contained minimal suspended solids. No staining, odor, or sheen observed.  | Not identified  | Storm water from catchment areas SW-4, SW-6, and SW-7 pumped to interceptor SW-5 beginning in the 2014-2015 storm season. Combined storm water is pumped to sedimentation tank for increased solids removal prior to discharge. Construction of treatment system TS-2 anticipated before 2015-2016 rainy season.  |
| Observation Date and Time:  | November 20, 2014, 3:00 PM | SW-11                          | Discharge was gray with minor suspended solids. No staining, odor, sheen, or significant turbidity observed.   | Not identified  |   |
| Observation Date and Time:  | November 20, 2014, 4:50 PM | SW-12                          | Discharge was gray/brown with minor suspended solids. No staining, odor, sheen, or significant turbidity observed.   | Not identified  | Construction of treatment system TS-3 anticipated before 2015-2016 rainy season.  |
| Observation Date and Time:  | December 2, 2014, 12:20 PM | TS1-E                          | Discharge was tan with some turbidity. No solids, staining, odor, or sheen observed.   | Not identified  |   |
| Observation Date and Time:  | December 2, 2014, 11:40 AM | SW-3                           | Discharge was dark gray and turbid. No solids, staining, odor, or sheen observed.  | Bulk product storage/handling in the SW-3 catchment area. | Construction of treatment system TS-2 anticipated before 2015-2016 rainy season.  |
| Observation Date and Time:  | December 2, 2014, 11:30 AM | SW-4/5/6/7                     | Discharge was gray, lightly turbid, and contained minimal suspended solids. No staining, odor, or sheen observed.  | Not identified  | Construction of treatment system TS-2 anticipated before 2015-2016 rainy season.  |
| Observation Date and Time:  | December 2, 2014, 10:55 AM | SW-11                          | Discharge was clear/lightly gray with some turbidity. No solids, staining, odor, sheen, or significant turbidity observed.   | Not identified  |   |
| Observation Date and Time:  | December 2, 2014, 1:00 PM  | SW-12                          | Discharge was clear with no noticeable turbidity. No solids, staining, odor, sheen, or significant turbidity observed.   | Not identified  | Construction of treatment system TS-3 anticipated before 2015-2016 rainy season.  |
| Observation Date and Time:  | December 11, 2014, 9:45 AM | TS1-E                          | Discharge was light tan with no noticeable turbidity. No solids, staining, odor, or sheen observed.  | Not identified  |   |
| Observation Date and Time:  | December 11, 2014, 8:40 AM | SW-3                           | Discharge was tan/gray and moderately turbid. No solids, staining, odor, or sheen observed.  | Not identified  | Construction of treatment system TS-2 anticipated before 2015-2016 rainy season.  |
| Observation Date and Time:  | December 11, 2014, 8:46 AM | SW-4/5/6/7                     | Discharge was clear/light tan with no noticeable turbidity. No solids, staining, odor, or sheen observed.  | Not identified  | Construction of treatment system TS-2 anticipated before 2015-2016 rainy season.  |



| <b>2014 - 2015</b><br><b>ANNUAL REPORT</b><br><b>FORM 4 (continued) - MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES</b> |                            |                                |  |   |   |
|---|----------------------------|--------------------------------|--|---|---|
|   |                            | Drainage Location Description: | Describe Storm Water Discharge Characteristics<br>Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining, containing floating objects or an oil sheen, has odors, etc. | Identify and Describe Source(s) of Pollutants | Describe any revised or new BMPs and their date of implementation   |
| Observation Date and Time:  | December 11, 2014, 8:55 AM | SW-11                          | Discharge was tan/gray with some turbidity. No solids, staining, odor, or sheen observed.  | Not identified                                |   |
| Observation Date and Time:  | December 11, 2014, 9:10 AM | SW-12                          | Discharge was gray with medium turbidity. No solids, staining, odor, or sheen observed.  | Not identified                                | Construction of treatment system TS-3 anticipated before 2015-2016 rainy season.  |
| Observation Date and Time:  | February 6, 2015, 1:50 PM  | TS1-E                          | Discharge was very clear. No color, turbidity, solids, staining, odor, or sheen observed.  | Not identified                                |   |
| Observation Date and Time:  | February 6, 2015, 2:15 PM  | SW-11                          | Discharge was very clear. No color, turbidity, solids, staining, odor, or sheen observed.  | Not identified                                |   |
| Observation Date and Time:  | February 6, 2015, 2:05 PM  | SW-12                          | Discharge was gray with light turbidity. No solids, staining, odor, or sheen was observed.   | Not identified                                | Construction of treatment system TS-3 anticipated before 2015-2016 rainy season.  |
| Observation Date and Time:  | April 7, 2015, 9:10 AM     | TS1-E                          | Discharge was gray/tan with slight turbidity. No solids, staining, odor, or sheen was observed.  | Not identified                                |   |
| Observation Date and Time:  | April 7, 2015, 9:30 AM     | SW-3/4/5/6/7                   | Discharge was gray/brown and cloudy/turbid. A slight petroleum odor was noted. No solids, staining, or sheen was observed.   | Not identified                                | Storm water from catchment area SW-3 was routed to the aboveground sedimentation tank at SW-5 in April 2015. Storm water from interceptors SW-3 through SW-7 is combined in the sedimentation tank for increased solids removal prior to discharge. Construction of treatment system TS-2 anticipated before 2015-2016 rainy season. Discharge valve on SW-5 is routinely checked and repaired as needed. |
| Observation Date and Time:  | April 7, 2015, 9:450 AM    | SW-11                          | Discharge was dark gray and almost opaque with turbidity. A slight petroleum odor was noted. No solids, staining, or sheen was observed.   | Green coke in South Parr Yard                 |   |

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**ATTACHMENT B**

ADDITIONAL EXPLANATIONS

**2014-2015 Annual Report**  
**Storm Water Discharges Associated with Industrial Activities**  
**Levin Richmond Terminal Corporation**  
**Additional Explanations**

**E.5.** During each of the four storm events, samples were collected from each location that produced discharge. As a result, only a subset of the potential discharge locations were sampled during each event.

**E.6.** Samples were collected during the first hour of discharge during two of the four qualified storm events sampled, on December 11, 2014 and February 6, 2015. Exact discharge start times were unknown during the first qualified storm event of the year (November 20, 2014); samples were collected between approximately five minutes and an hour and half after discharge at each location. During the storm event on December 2, 2014, samples were collected after the first hour of discharge.

**G.1.** No qualified storm events occurred during scheduled work hours in October 2014, January 2015, March 2015, April 2015 and May 2015.

**ATTACHMENT C**

**ANALYTICAL DATA**

Table 1. 2014-2015 Annual Storm Water Sampling Data for General Parameters and Metals

| Discharge Location         | Notes     | pH   | Specific Conductance<br>µmhos/cm | Total Oil and Grease<br>mg/L | Total Suspended Solids<br>mg/L | Aluminum<br>µg/L | Copper<br>µg/L | Iron<br>µg/L | Lead<br>µg/L | Nickel<br>µg/L | Zinc<br>µg/L | Residual Chitosan <sup>d,e</sup><br>mg/L |
|----------------------------|-----------|------|----------------------------------|------------------------------|--------------------------------|------------------|----------------|--------------|--------------|----------------|--------------|--|
| <b>TS1-I<sup>a</sup></b>   |           |      |                                  |                              |                                |                  |                |              |              |                |              |  |
| 11/20/2014                 |           | 8.95 | --                               | < 4.8                        | 210                            | 2,700            | 50             | 7,900        | 100          | 14             | 790          | --                                       |
| 12/2/2014                  |           | 6.87 | 160                              | 3.8 J                        | 230                            | 1,600            | 11             | 3,000        | 19           | 4.5            | 200          | --                                       |
| 12/11/2014                 |           | 7.43 | ---                              | 1.0 J                        | 120                            | 3,200            | 9.0            | 2,200        | 10           | 3.7 J          | 130          | --                                       |
| 2/6/2015                   |           | 8.31 | ---                              | < 5.4                        | 550                            | 4,600            | 41             | 7,700        | 55           | 18             | 820          | --                                       |
| <b>TS1-E</b>               |           |      |                                  |                              |                                |                  |                |              |              |                |              |  |
| 11/20/2014                 |           | 7.82 | 1,000                            | < 4.9                        | 12                             | 160              | 7.5            | 310          | 5.5          | 2.3            | 240          | < 0.1                                    |
| 12/2/2014                  |           | 6.85 | 200                              | < 5.5                        | 14                             | 140              | 0.89 J         | 170          | 0.73         | 0.5 J          | 23           | < 0.1                                    |
| 12/11/2014                 |           | 7.37 | 170                              | 1.8 J                        | 24                             | 600              | 2.8 J          | 350          | 2.0          | < 15           | 60           | < 0.1                                    |
| 2/6/2015                   |           | 7.70 | 1,500                            | < 5.2                        | 8.4                            | 230              | 2.3            | 180          | 1.4          | 1.6 J          | 92           | < 0.1                                    |
| <b>SW-3</b>                |           |      |                                  |                              |                                |                  |                |              |              |                |              |  |
| 11/20/2014                 |           | 6.92 | 3,500                            | < 5.6                        | 190                            | 1,300            | 14 J           | 2,600        | 9.6 J        | 6.5 J          | 210          | --                                       |
| 12/2/2014                  |           | 7.31 | 890                              | < 6.6                        | 120                            | 950              | 7.6            | 2,100        | 7.7          | 3.3            | 100          | --                                       |
| 12/2/2014                  | Duplicate | 7.31 | 900                              | < 5.2                        | 120                            | 1,000            | 7.4            | 2,100        | 7.6          | 3.2            | 100          | --                                       |
| 12/11/2014                 |           | 7.82 | 3,100                            | 2.5 J                        | 280                            | 2,700            | 13             | 3,700        | 10           | 5.5 J          | 170          | --                                       |
| <b>SW-4/5/6/7</b>          |           |      |                                  |                              |                                |                  |                |              |              |                |              |  |
| 11/20/2014                 |           | 7.71 | 230                              | < 5.5                        | 10                             | 160              | 26             | 670          | 11           | 4.9            | 400          | --                                       |
| 11/20/2014                 | Duplicate | 7.71 | 230                              | < 5.5                        | 9.0                            | 190              | 27             | 700          | 12           | 5.0            | 410          | --                                       |
| 12/2/2014                  |           | 6.80 | 220                              | < 5.2                        | 79                             | 830              | 8.9            | 1,300        | 7.5          | 2.9 J          | 96           | --                                       |
| 12/11/2014                 |           | 7.61 | 540                              | 1.2 J                        | 20                             | 480 J            | 5.7            | 430          | 1.9 J        | < 15           | 91           | --                                       |
| <b>S PARR SW-11</b>        |           |      |                                  |                              |                                |                  |                |              |              |                |              |  |
| 11/20/2014                 |           | 6.78 | 8,500                            | < 5.7                        | 30                             | 170              | 5.1            | 410          | 3.0          | 4.4            | 65           | --                                       |
| 12/2/2014                  |           | 6.71 | 2,400                            | < 5.4                        | 17                             | 130              | 2.2            | 250          | 1.2          | 2.2 J          | 27           | --                                       |
| 12/11/2014                 |           | 7.65 | 20,000                           | 1.2 J                        | 39                             | 240 J            | 5.5            | 540          | 1.6 J        | 5.6 J          | 84           | --                                       |
| 12/11/2014                 | Duplicate | 7.66 | 20,000                           | < 5.3                        | 39                             | 250 J            | 5.2            | 530          | 1.8 J        | 6.0 J          | 87           | --                                       |
| 2/6/2015                   |           | 7.54 | 52,000                           | < 5.3                        | 10                             | < 100            | 2.9            | 230          | 0.27 J       | 4.7            | 210          | --                                       |
| <b>N PARR SW-12</b>        |           |      |                                  |                              |                                |                  |                |              |              |                |              |  |
| 11/20/2014                 |           | 8.01 | 160                              | < 5.6                        | 12                             | 710              | 27             | 2,300        | 13           | 12             | 160          | --                                       |
| 12/2/2014                  |           | 7.49 | 76                               | < 5.1                        | 23                             | 580              | 9.1            | 1,300        | 6.6          | 6.6            | 75           | --                                       |
| 12/11/2014                 |           | 7.62 | 69                               | 1.3 J                        | 36                             | 840              | 11             | 1,700        | 10           | 6.0 J          | 110          | --                                       |
| 2/6/2015                   |           | 7.22 | 1,100                            | < 5.2                        | 55                             | 1,900            | 25             | 3,600        | 15           | 25             | 240          | --                                       |
| <b>SHEET-1<sup>b</sup></b> |           |      |                                  |                              |                                |                  |                |              |              |                |              |  |
| 12/11/2014                 |           | ---  | ---                              | ---                          | 79                             | ---              | ---            | ---          | ---          | ---            | ---          | --                                       |
| <b>SHEET-2<sup>c</sup></b> |           |      |                                  |                              |                                |                  |                |              |              |                |              |  |
| 12/2/2014                  |           | 7.88 | ---                              | ---                          | 2.1                            | ---              | ---            | ---          | ---          | ---            | ---          | --                                       |
| 12/11/2014                 |           | ---  | ---                              | ---                          | 51                             | ---              | ---            | ---          | ---          | ---            | ---          | --                                       |

**Notes:**

<sup>a</sup> TS1-I is the combined influent from interceptors SW-1 and SW-2 and does not represent discharge. It is used to evaluate TS-1 effectiveness.

<sup>b</sup> SHEET-1 is a sheet flow sample collected between the Track Out Prevention Zone at the Main Yard entrance gate and the public right-of-way.

<sup>c</sup> SHEET-2 is a sheet flow sample collected between the Track Out Prevention Zone at the South Parr Yard entrance gate and the public right-of-way.

<sup>d</sup> Residual chitosan field tested using StormKlear HaloSource HS-SOP-5051-02 colorimetric method unless otherwise noted.

<sup>e</sup> Residual chitosan result verified by CEL Analytical of San Francisco, CA using StormKlear HaloSource HS-SOP-5051-02 method.

**Acronyms/Abbreviations:**

--- = not analyzed < n = not detected above the reporting limit

J = concentration reported is an estimated value

mg/L = milligrams per liter

Table 2. 2014-2015 Annual Storm Water Sampling Data for Pesticides

|                   | Notes     | 4,4'-DDD<br>µg/L | 4,4'-DDE<br>µg/L | 4,4'-DDT<br>µg/L | Aldrin<br>µg/L | alpha-BHC<br>µg/L | alpha-Chlordane<br>µg/L | beta-BHC<br>µg/L | Chlordane<br>µg/L | delta-BHC<br>µg/L | Dieldrin<br>µg/L | Endosulfan I<br>µg/L | Endosulfan II<br>µg/L | Endosulfan sulfate<br>µg/L | Endrin<br>µg/L | Endrin aldehyde<br>µg/L | gamma-BHC (Lindane)<br>µg/L | gamma-Chlordane<br>µg/L | Heptachlor<br>µg/L | Heptachlor epoxide<br>µg/L | Methoxychlor<br>µg/L | Toxaphene<br>µg/L |
|-------------------|-----------|------------------|------------------|------------------|----------------|-------------------|-------------------------|------------------|-------------------|-------------------|------------------|----------------------|-----------------------|----------------------------|----------------|-------------------------|-----------------------------|-------------------------|--------------------|----------------------------|----------------------|-------------------|
| <b>SW-3</b>       |           |                  |                  |                  |                |                   |                         |                  |                   |                   |                  |                      |                       |                            |                |                         |                             |                         |                    |                            |                      |                   |
| 11/20/2014        | Duplicate | < 0.0019         | < 0.0019         | < 0.0019         | < 0.0019       | < 0.096           | < 0.0019                | < 0.096          | < 0.96            | < 0.096           | < 0.0019         | < 0.096              | < 0.096               | < 0.096                    | < 0.0019       | < 0.096                 | < 0.0019                    | < 0.0019                | <b>0.0016</b>      | < 0.0019                   | < 0.096              | < 0.024           |
| 12/2/2014         |           | <b>0.0028</b>    | <b>0.014</b>     | <b>0.019</b>     | < 0.0020       | < 0.097           | < 0.0020                | < 0.097          | < 0.97            | < 0.097           | < 0.0020         | < 0.097              | < 0.097               | < 0.097                    | < 0.0020       | < 0.097                 | < 0.0020                    | < 0.0020                | < 0.0020           | < 0.0020                   | < 0.097              | < 0.025           |
| 12/2/2014         |           | <b>0.0025</b>    | <b>0.014</b>     | <b>0.019</b>     | < 0.0019       | < 0.097           | < 0.0019                | < 0.097          | < 0.97            | < 0.097           | < 0.0019         | < 0.097              | < 0.097               | < 0.097                    | < 0.0019       | < 0.097                 | < 0.0019                    | < 0.0019                | < 0.0019           | < 0.0019                   | < 0.097              | < 0.024           |
| 12/11/2014        |           | <b>0.0023</b>    | < 0.0022         | <b>0.039</b>     | < 0.0022       | < 0.095           | < 0.0022                | < 0.095          | < 0.95            | < 0.095           | < 0.0022         | <b>0.030</b>         | < 0.095               | < 0.095                    | < 0.0022       | < 0.095                 | < 0.0022                    | < 0.0022                | < 0.0022           | < 0.0022                   | < 0.095              | < 0.027           |
| <b>SW-4/5/6/7</b> |           |                  |                  |                  |                |                   |                         |                  |                   |                   |                  |                      |                       |                            |                |                         |                             |                         |                    |                            |                      |                   |
| 11/20/2014        | Duplicate | < 0.0019         | < 0.0019         | <b>0.020</b>     | < 0.0019       | < 0.096           | < 0.0019                | < 0.096          | < 0.96            | < 0.096           | < 0.0019         | <b>0.042</b>         | < 0.096               | < 0.096                    | <b>0.011</b>   | < 0.096                 | < 0.0019                    | < 0.0019                | < 0.0019           | < 0.0019                   | < 0.096              | < 0.024           |
| 11/20/2014        |           | < 0.0019         | < 0.0019         | <b>0.022</b>     | < 0.0019       | < 0.10            | < 0.0019                | < 0.10           | < 1.0             | < 0.10            | < 0.0019         | <b>0.039</b>         | < 0.10                | < 0.10                     | <b>0.012</b>   | < 0.10                  | < 0.0019                    | < 0.0019                | < 0.0019           | < 0.0019                   | < 0.10               | < 0.024           |
| 12/2/2014         |           | < 0.0019         | < 0.0019         | <b>0.0035</b>    | < 0.0019       | < 0.096           | < 0.0019                | < 0.096          | < 0.96            | < 0.096           | < 0.0019         | < 0.096              | < 0.096               | < 0.096                    | < 0.0019       | < 0.096                 | < 0.0019                    | < 0.0019                | < 0.0019           | < 0.0019                   | < 0.096              | < 0.024           |
| 12/11/2014        |           | <b>0.0033</b>    | < 0.0019         | <b>0.0049</b>    | < 0.0019       | < 0.095           | < 0.0019                | < 0.095          | < 0.95            | < 0.095           | < 0.0019         | < 0.095              | < 0.095               | < 0.095                    | < 0.0019       | < 0.095                 | < 0.0019                    | < 0.0019                | < 0.0019           | < 0.0019                   | < 0.095              | < 0.024           |

Notes:

Detected concentrations of pesticides are displayed in bold.

Acronyms/Abbreviations:

J = concentration reported is an estimated value

TPH = total petroleum hydrocarbons

~ n = not detected above the reporting limit

--- = not analyzed

µg/L = micrograms per liter

USEPA = United States Environmental Protection Agency



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-61467-1

Client Project/Site: LRT 2014-2015 Annual Stormwater

For:

Weiss Associates

2200 Powell Street

Suite 925

Emeryville, California 94608

Attn: Mr. Scott Bourne



Authorized for release by:

12/3/2014 6:49:21 PM

Micah Smith, Project Manager II

(925)484-1919

[micah.smith@testamericainc.com](mailto:micah.smith@testamericainc.com)

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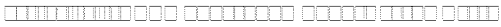
*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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1. PURPOSE AND SCOPE

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| תחום   | מספר תלמידים | מספר מורים | מספר חדרים | מספר שעות לימוד | מספר ספרים | מספר חומרים | מספר חומרים | מספר חומרים |
|--------|--------------|------------|------------|-----------------|------------|-------------|-------------|-------------|
| תחום א | 100          | 10         | 10         | 1000            | 100        | 100         | 100         | 100         |
| תחום ב | 200          | 20         | 20         | 2000            | 200        | 200         | 200         | 200         |
| תחום ג | 300          | 30         | 30         | 3000            | 300        | 300         | 300         | 300         |
| תחום ד | 400          | 40         | 40         | 4000            | 400        | 400         | 400         | 400         |
| תחום ה | 500          | 50         | 50         | 5000            | 500        | 500         | 500         | 500         |
| תחום ו | 600          | 60         | 60         | 6000            | 600        | 600         | 600         | 600         |
| תחום ז | 700          | 70         | 70         | 7000            | 700        | 700         | 700         | 700         |
| תחום ח | 800          | 80         | 80         | 8000            | 800        | 800         | 800         | 800         |
| תחום ט | 900          | 90         | 90         | 9000            | 900        | 900         | 900         | 900         |
| תחום י | 1000         | 100        | 100        | 10000           | 1000       | 1000        | 1000        | 1000        |

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The diagram illustrates a multi-stage system with four main blocks, each containing internal components and data flow arrows. Block 1 is a vertical rectangle with inputs  $x$  and  $y$  at the top and output  $z$  at the bottom. Block 2 is a horizontal rectangle with inputs  $x$  and  $y$  at the top and output  $z$  at the bottom. Block 3 is a vertical rectangle with inputs  $x$  and  $y$  at the top and output  $z$  at the bottom. Block 4 is a horizontal rectangle with inputs  $x$  and  $y$  at the top and output  $z$  at the bottom. Arrows indicate the flow of data between these blocks and their internal components.

|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|







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|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84   | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84   | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84   | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84   | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84</ |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

| Year | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | 25   | 26   | 27   | 28   | 29   | 30   | 31   | 32   | 33   | 34   | 35   | 36   | 37   | 38   | 39   | 40   | 41   | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 2    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | 25   | 26   | 27   | 28   | 29   | 30   | 31   | 32   | 33   | 34   | 35   | 36   | 37   | 38   | 39   | 40   | 41   | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 3    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | 25   | 26   | 27   | 28   | 29   | 30   | 31   | 32   | 33   | 34   | 35   | 36   | 37   | 38   | 39   | 40   | 41   | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 4    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | 25   | 26   | 27   | 28   | 29   | 30   | 31   | 32   | 33   | 34   | 35   | 36   | 37   | 38   | 39   | 40   | 41   | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 5    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | 25   | 26   | 27   | 28   | 29   | 30   | 31   | 32   | 33   | 34   | 35   | 36   | 37   | 38   | 39   | 40   | 41   | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |

[illegible]

The diagram illustrates the experimental setup. A participant is seated at a table, looking at a computer screen. The screen displays a 3D model of a rectangular object with a grid of points. The participant is interacting with the screen using a mouse. The setup is labeled with 'Participant', 'Screen', and 'Mouse'.

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[illegible][illegible]





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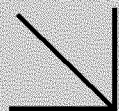








Calscience

**WORK ORDER NUMBER: 14-11-1863***The difference is service*

AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For****Client:** Weiss Associates**Client Project Name:** LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3**Attention:** Scott Bourne  
2200 Powell Street  
Suite 925  
Emeryville, CA 94608-1879

Approved for release on 12/02/2014 by:  
Virendra Patel  
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Client Project Name: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3  
 Work Order Number: 14-11-1863

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## Work Order Narrative

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**Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 11/22/14. They were assigned to Work Order 14-11-1863.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



## Sample Summary

---

|                               |   |
|-------------------------------|---|
| Client: Weiss Associates      | Work Order: 14-11-1863                                    |
| 2200 Powell Street, Suite 925 | Project Name: LRT 2014-2015 Annual Storm Water Sampling / |
| Emeryville, CA 94608-1879     | 426-2026.01 Task 1.1.3                                    |
|                               | PO Number:  |
|                               | Date/Time Received: 11/22/14 09:20                        |
|                               | Number of Containers: 6                                   |

---

Attn: Scott Bourne

---

| Sample Identification | Lab Number   | Collection Date and Time | Number of Containers | Matrix  |
|-----------------------|--------------|--------------------------|----------------------|---------|
| SW-4/5/6/7-112014     | 14-11-1863-1 | 11/20/14 14:45           | 2                    | Aqueous |
| SW-4/5/6/7-112014-DUP | 14-11-1863-2 | 11/20/14 14:50           | 2                    | Aqueous |
| SW-3-112014           | 14-11-1863-3 | 11/20/14 15:35           | 2                    | Aqueous |

  
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## Detections Summary

Client: Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Work Order: 14-11-1863  
Project Name: LRT 2014-2015 Annual Storm Water Sampling /  
426-2026.01 Task 1.1.3  
Received: 11/22/14

Attn: Scott Bourne

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### Client SampleID

| <u>Analyte</u>                       | <u>Result</u> | <u>Qualifiers</u> | <u>RL</u> | <u>Units</u> | <u>Method</u> | <u>Extraction</u> |
|--------------------------------------|---------------|-------------------|-----------|--------------|---------------|-------------------|
| SW-4/5/6/7-112014 (14-11-1863-1)     |               |                   |           |              |               |                   |
| 4,4'-DDT                             | 20            |                   | 1.9       | ng/L         | EPA 8081A     | EPA 3510C         |
| Endosulfan I                         | 0.042         | J                 | 0.027*    | ug/L         | EPA 8081A     | EPA 3510C         |
| Endrin                               | 11            |                   | 1.9       | ng/L         | EPA 8081A     | EPA 3510C         |
| SW-4/5/6/7-112014-DUP (14-11-1863-2) |               |                   |           |              |               |                   |
| 4,4'-DDT                             | 22            |                   | 1.9       | ng/L         | EPA 8081A     | EPA 3510C         |
| Endosulfan I                         | 0.039         | J                 | 0.028*    | ug/L         | EPA 8081A     | EPA 3510C         |
| Endrin                               | 12            |                   | 1.9       | ng/L         | EPA 8081A     | EPA 3510C         |
| SW-3-112014 (14-11-1863-3)           |               |                   |           |              |               |                   |
| Heptachlor                           | 1.6           | J                 | 0.35*     | ng/L         | EPA 8081A     | EPA 3510C         |

Subcontracted analyses, if any, are not included in this summary.

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\* MDL is shown

## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 11/22/14  
Work Order: 14-11-1863  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ug/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| SW-4/5/6/7-112014    | 14-11-1863-1-B    | 11/20/14<br>14:45   | Aqueous | GC 51      | 11/24/14      | 11/25/14<br>18:26  | 141124L03   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL    | MDL   | DF   | Qualifiers |
|--------------------|--------|-------|-------|------|------------|
| Alpha-BHC          | ND     | 0.096 | 0.027 | 1.00 |            |
| Beta-BHC           | ND     | 0.096 | 0.029 | 1.00 |            |
| Delta-BHC          | ND     | 0.096 | 0.027 | 1.00 |            |
| Endosulfan I       | 0.042  | 0.096 | 0.027 | 1.00 | J          |
| Endrin Aldehyde    | ND     | 0.096 | 0.025 | 1.00 |            |
| Endosulfan II      | ND     | 0.096 | 0.026 | 1.00 |            |
| Endosulfan Sulfate | ND     | 0.096 | 0.028 | 1.00 |            |
| Methoxychlor       | ND     | 0.096 | 0.024 | 1.00 |            |
| Chlordane          | ND     | 0.96  | 0.32  | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 85       | 50-135         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 93       | 50-135         |            |

| SW-4/5/6/7-112014-DUP | 14-11-1863-2-B | 11/20/14<br>14:50 | Aqueous | GC 51 | 11/24/14 | 11/25/14<br>18:40 | 141124L03 |
|-----------------------|----------------|-------------------|---------|-------|----------|-------------------|-----------|
|-----------------------|----------------|-------------------|---------|-------|----------|-------------------|-----------|

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL   | MDL   | DF   | Qualifiers |
|--------------------|--------|------|-------|------|------------|
| Alpha-BHC          | ND     | 0.10 | 0.028 | 1.00 |            |
| Beta-BHC           | ND     | 0.10 | 0.030 | 1.00 |            |
| Delta-BHC          | ND     | 0.10 | 0.029 | 1.00 |            |
| Endosulfan I       | 0.039  | 0.10 | 0.028 | 1.00 | J          |
| Endrin Aldehyde    | ND     | 0.10 | 0.026 | 1.00 |            |
| Endosulfan II      | ND     | 0.10 | 0.027 | 1.00 |            |
| Endosulfan Sulfate | ND     | 0.10 | 0.029 | 1.00 |            |
| Methoxychlor       | ND     | 0.10 | 0.025 | 1.00 |            |
| Chlordane          | ND     | 1.0  | 0.33  | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 83       | 50-135         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 89       | 50-135         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 11/22/14  
Work Order: 14-11-1863  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ug/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| SW-3-112014          | 14-11-1863-3-B    | 11/20/14<br>15:35   | Aqueous | GC 51      | 11/24/14      | 11/25/14<br>18:54  | 141124L03   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL    | MDL   | DF   | Qualifiers |
|--------------------|--------|-------|-------|------|------------|
| Alpha-BHC          | ND     | 0.096 | 0.027 | 1.00 |            |
| Beta-BHC           | ND     | 0.096 | 0.029 | 1.00 |            |
| Delta-BHC          | ND     | 0.096 | 0.027 | 1.00 |            |
| Endosulfan I       | ND     | 0.096 | 0.027 | 1.00 |            |
| Endrin Aldehyde    | ND     | 0.096 | 0.025 | 1.00 |            |
| Endosulfan II      | ND     | 0.096 | 0.026 | 1.00 |            |
| Endosulfan Sulfate | ND     | 0.096 | 0.028 | 1.00 |            |
| Methoxychlor       | ND     | 0.096 | 0.024 | 1.00 |            |
| Chlordane          | ND     | 0.96  | 0.32  | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 86       | 50-135         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 91       | 50-135         |            |

| Method Blank | 099-12-529-758 | N/A | Aqueous | GC 51 | 11/24/14 | 11/25/14<br>18:11 | 141124L03 |
|--------------|----------------|-----|---------|-------|----------|-------------------|-----------|
|--------------|----------------|-----|---------|-------|----------|-------------------|-----------|

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL   | MDL   | DF   | Qualifiers |
|--------------------|--------|------|-------|------|------------|
| Alpha-BHC          | ND     | 0.10 | 0.028 | 1.00 |            |
| Beta-BHC           | ND     | 0.10 | 0.030 | 1.00 |            |
| Delta-BHC          | ND     | 0.10 | 0.029 | 1.00 |            |
| Endosulfan I       | ND     | 0.10 | 0.028 | 1.00 |            |
| Endrin Aldehyde    | ND     | 0.10 | 0.026 | 1.00 |            |
| Endosulfan II      | ND     | 0.10 | 0.027 | 1.00 |            |
| Endosulfan Sulfate | ND     | 0.10 | 0.029 | 1.00 |            |
| Methoxychlor       | ND     | 0.10 | 0.025 | 1.00 |            |
| Chlordane          | ND     | 1.0  | 0.33  | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 88       | 50-135         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 93       | 50-135         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 11/22/14  
Work Order: 14-11-1863  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-  
2026.01 Task 1.1.3

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| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| SW-4/5/6/7-112014    | 14-11-1863-1-A    | 11/20/14<br>14:45   | Aqueous | GC 44      | 11/25/14      | 11/29/14<br>14:19  | 141125L07   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL  | MDL  | DF   | Qualifiers |
|--------------------|--------|-----|------|------|------------|
| Aldrin             | ND     | 1.9 | 0.31 | 1.00 |            |
| 4,4'-DDD           | ND     | 1.9 | 0.53 | 1.00 |            |
| 4,4'-DDE           | ND     | 1.9 | 0.46 | 1.00 |            |
| 4,4'-DDT           | 20     | 1.9 | 0.53 | 1.00 |            |
| Alpha Chlordane    | ND     | 1.9 | 0.47 | 1.00 |            |
| Dieldrin           | ND     | 1.9 | 0.53 | 1.00 |            |
| Gamma Chlordane    | ND     | 1.9 | 0.47 | 1.00 |            |
| Toxaphene          | ND     | 24  | 7.9  | 1.00 |            |
| Endrin             | 11     | 1.9 | 0.30 | 1.00 |            |
| Gamma-BHC          | ND     | 1.9 | 0.44 | 1.00 |            |
| Heptachlor         | ND     | 1.9 | 0.35 | 1.00 |            |
| Heptachlor Epoxide | ND     | 1.9 | 0.33 | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 92       | 50-150         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 96       | 50-150         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 11/22/14  
Work Order: 14-11-1863  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-  
2026.01 Task 1.1.3

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| Client Sample Number  | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|-----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| SW-4/5/6/7-112014-DUP | 14-11-1863-2-A    | 11/20/14<br>14:50   | Aqueous | GC 44      | 11/25/14      | 11/29/14<br>14:33  | 141125L07   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL  | MDL  | DF   | Qualifiers |
|--------------------|--------|-----|------|------|------------|
| Aldrin             | ND     | 1.9 | 0.31 | 1.00 |            |
| 4,4'-DDD           | ND     | 1.9 | 0.53 | 1.00 |            |
| 4,4'-DDE           | ND     | 1.9 | 0.46 | 1.00 |            |
| 4,4'-DDT           | 22     | 1.9 | 0.53 | 1.00 |            |
| Alpha Chlordane    | ND     | 1.9 | 0.47 | 1.00 |            |
| Dieldrin           | ND     | 1.9 | 0.53 | 1.00 |            |
| Gamma Chlordane    | ND     | 1.9 | 0.47 | 1.00 |            |
| Toxaphene          | ND     | 24  | 7.9  | 1.00 |            |
| Endrin             | 12     | 1.9 | 0.30 | 1.00 |            |
| Gamma-BHC          | ND     | 1.9 | 0.44 | 1.00 |            |
| Heptachlor         | ND     | 1.9 | 0.35 | 1.00 |            |
| Heptachlor Epoxide | ND     | 1.9 | 0.33 | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 97       | 50-150         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 97       | 50-150         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 11/22/14  
Work Order: 14-11-1863  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-  
2026.01 Task 1.1.3

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| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| SW-3-112014          | 14-11-1863-3-A    | 11/20/14<br>15:35   | Aqueous | GC 44      | 11/25/14      | 11/29/14<br>14:47  | 141125L07   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL  | MDL  | DF   | Qualifiers |
|--------------------|--------|-----|------|------|------------|
| Aldrin             | ND     | 1.9 | 0.31 | 1.00 |            |
| 4,4'-DDD           | ND     | 1.9 | 0.53 | 1.00 |            |
| 4,4'-DDE           | ND     | 1.9 | 0.46 | 1.00 |            |
| 4,4'-DDT           | ND     | 1.9 | 0.53 | 1.00 |            |
| Alpha Chlordane    | ND     | 1.9 | 0.47 | 1.00 |            |
| Dieldrin           | ND     | 1.9 | 0.53 | 1.00 |            |
| Gamma Chlordane    | ND     | 1.9 | 0.47 | 1.00 |            |
| Toxaphene          | ND     | 24  | 7.9  | 1.00 |            |
| Endrin             | ND     | 1.9 | 0.30 | 1.00 |            |
| Gamma-BHC          | ND     | 1.9 | 0.44 | 1.00 |            |
| Heptachlor         | 1.6    | 1.9 | 0.35 | 1.00 | J          |
| Heptachlor Epoxide | ND     | 1.9 | 0.33 | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 91       | 50-150         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 80       | 50-150         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 11/22/14  
Work Order: 14-11-1863  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-  
2026.01 Task 1.1.3

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| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| Method Blank         | 099-16-036-13     | N/A                 | Aqueous | GC 44      | 11/25/14      | 11/29/14<br>11:14  | 141125L07   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL  | MDL  | DF   | Qualifiers |
|--------------------|--------|-----|------|------|------------|
| Aldrin             | ND     | 2.0 | 0.33 | 1.00 |            |
| 4,4'-DDD           | 0.80   | 2.0 | 0.55 | 1.00 | J          |
| 4,4'-DDE           | ND     | 2.0 | 0.48 | 1.00 |            |
| 4,4'-DDT           | ND     | 2.0 | 0.55 | 1.00 |            |
| Alpha Chlordane    | ND     | 2.0 | 0.49 | 1.00 |            |
| Dieldrin           | ND     | 2.0 | 0.55 | 1.00 |            |
| Gamma Chlordane    | ND     | 2.0 | 0.49 | 1.00 |            |
| Toxaphene          | ND     | 25  | 8.2  | 1.00 |            |
| Endrin             | ND     | 2.0 | 0.31 | 1.00 |            |
| Gamma-BHC          | 0.60   | 2.0 | 0.46 | 1.00 | J          |
| Heptachlor         | ND     | 2.0 | 0.36 | 1.00 |            |
| Heptachlor Epoxide | ND     | 2.0 | 0.34 | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 113      | 50-150         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 81       | 50-150         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - LCS/LCSD

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 11/22/14  
Work Order: 14-11-1863  
Preparation: EPA 3510C  
Method: EPA 8081A

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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| Quality Control Sample ID | Type | Matrix  | Instrument | Date Prepared | Date Analyzed  | LCS/LCSD Batch Number |
|---------------------------|------|---------|------------|---------------|----------------|-----------------------|
| 099-12-529-758            | LCS  | Aqueous | GC 51      | 11/24/14      | 11/25/14 17:00 | 141124L03             |
| 099-12-529-758            | LCSD | Aqueous | GC 51      | 11/24/14      | 11/25/14 17:14 | 141124L03             |

| Parameter          | Spike Added | LCS Conc. | LCS %Rec. | LCSD Conc. | LCSD %Rec. | %Rec. CL | ME CL  | RPD | RPD CL | Qualifiers |
|--------------------|-------------|-----------|-----------|------------|------------|----------|--------|-----|--------|------------|
| Alpha-BHC          | 0.5000      | 0.4944    | 99        | 0.4956     | 99         | 50-135   | 36-149 | 0   | 0-25   |            |
| Gamma-BHC          | 0.5000      | 0.5003    | 100       | 0.5136     | 103        | 50-135   | 36-149 | 3   | 0-25   |            |
| Beta-BHC           | 0.5000      | 0.4108    | 82        | 0.4458     | 89         | 50-135   | 36-149 | 8   | 0-25   |            |
| Heptachlor         | 0.5000      | 0.5084    | 102       | 0.4579     | 92         | 50-135   | 36-149 | 10  | 0-25   |            |
| Delta-BHC          | 0.5000      | 0.5688    | 114       | 0.4934     | 99         | 50-135   | 36-149 | 14  | 0-25   |            |
| Aldrin             | 0.5000      | 0.4642    | 93        | 0.4186     | 84         | 50-135   | 36-149 | 10  | 0-25   |            |
| Heptachlor Epoxide | 0.5000      | 0.4738    | 95        | 0.4706     | 94         | 50-135   | 36-149 | 1   | 0-25   |            |
| Endosulfan I       | 0.5000      | 0.4718    | 94        | 0.4752     | 95         | 50-135   | 36-149 | 1   | 0-25   |            |
| Dieldrin           | 0.5000      | 0.4955    | 99        | 0.4963     | 99         | 50-135   | 36-149 | 0   | 0-25   |            |
| 4,4'-DDE           | 0.5000      | 0.4962    | 99        | 0.4905     | 98         | 50-135   | 36-149 | 1   | 0-25   |            |
| Endrin             | 0.5000      | 0.5254    | 105       | 0.5207     | 104        | 50-135   | 36-149 | 1   | 0-25   |            |
| Endrin Aldehyde    | 0.5000      | 0.6188    | 124       | 0.5010     | 100        | 50-135   | 36-149 | 21  | 0-25   |            |
| 4,4'-DDD           | 0.5000      | 0.4929    | 99        | 0.4869     | 97         | 50-135   | 36-149 | 1   | 0-25   |            |
| Endosulfan II      | 0.5000      | 0.4834    | 97        | 0.4840     | 97         | 50-135   | 36-149 | 0   | 0-25   |            |
| 4,4'-DDT           | 0.5000      | 0.5250    | 105       | 0.5012     | 100        | 50-135   | 36-149 | 5   | 0-25   |            |
| Endosulfan Sulfate | 0.5000      | 0.4751    | 95        | 0.4776     | 96         | 50-135   | 36-149 | 1   | 0-25   |            |
| Methoxychlor       | 0.5000      | 0.4980    | 100       | 0.4936     | 99         | 50-135   | 36-149 | 1   | 0-25   |            |

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS/LCSD

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 11/22/14  
Work Order: 14-11-1863  
Preparation: EPA 3510C  
Method: EPA 8081A

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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| Quality Control Sample ID | Type | Matrix  | Instrument | Date Prepared | Date Analyzed  | LCS/LCSD Batch Number |
|---------------------------|------|---------|------------|---------------|----------------|-----------------------|
| 099-16-036-13             | LCS  | Aqueous | GC 44      | 11/25/14      | 11/29/14 11:28 | 141125L07             |
| 099-16-036-13             | LCSD | Aqueous | GC 44      | 11/25/14      | 11/29/14 11:43 | 141125L07             |

| Parameter          | Spike Added | LCS Conc. | LCS %Rec. | LCSD Conc. | LCSD %Rec. | %Rec. CL | ME CL  | RPD | RPD CL | Qualifiers |
|--------------------|-------------|-----------|-----------|------------|------------|----------|--------|-----|--------|------------|
| Aldrin             | 50.00       | 53.43     | 107       | 53.14      | 106        | 50-150   | 33-167 | 1   | 0-25   |            |
| 4,4'-DDD           | 50.00       | 62.29     | 125       | 60.44      | 121        | 50-150   | 33-167 | 3   | 0-25   |            |
| 4,4'-DDE           | 50.00       | 62.19     | 124       | 61.47      | 123        | 50-150   | 33-167 | 1   | 0-25   |            |
| 4,4'-DDT           | 50.00       | 61.37     | 123       | 58.55      | 117        | 50-150   | 33-167 | 5   | 0-25   |            |
| Alpha Chlordane    | 50.00       | 55.26     | 111       | 57.19      | 114        | 50-150   | 33-167 | 3   | 0-25   |            |
| Dieldrin           | 50.00       | 61.47     | 123       | 59.54      | 119        | 50-150   | 33-167 | 3   | 0-25   |            |
| Gamma Chlordane    | 50.00       | 50.68     | 101       | 54.48      | 109        | 50-150   | 33-167 | 7   | 0-25   |            |
| Endrin             | 50.00       | 56.86     | 114       | 55.04      | 110        | 50-150   | 33-167 | 3   | 0-25   |            |
| Gamma-BHC          | 50.00       | 54.95     | 110       | 54.19      | 108        | 50-150   | 33-167 | 1   | 0-25   |            |
| Heptachlor         | 50.00       | 53.96     | 108       | 53.68      | 107        | 50-150   | 33-167 | 1   | 0-25   |            |
| Heptachlor Epoxide | 50.00       | 56.24     | 112       | 55.87      | 112        | 50-150   | 33-167 | 1   | 0-25   |            |

Total number of LCS compounds: 11

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

**Sample Analysis Summary Report**

Work Order: 14-11-1863

Page 1 of 1

| <u>Method</u> | <u>Extraction</u> | <u>Chemist ID</u> | <u>Instrument</u> | <u>Analytical Location</u> |
|---------------|-------------------|-------------------|-------------------|----------------------------|
| EPA 8081A     | EPA 3510C         | 669               | GC 44             | 1                          |
| EPA 8081A     | EPA 3510C         | 842               | GC 51             | 1                          |

## Glossary of Terms and Qualifiers

Work Order: 14-11-1863

Page 1 of 1

| <u>Qualifiers</u> | <u>Definition</u>  |
|-------------------|--|
| *                 | See applicable analysis comment.   |
| <                 | Less than the indicated value.   |
| >                 | Greater than the indicated value.  |
| 1                 | Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.   |
| 2                 | Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification. |
| 3                 | Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.  |
| 4                 | The MS/MSD RPD was out of control due to suspected matrix interference.  |
| 5                 | The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.  |
| 6                 | Surrogate recovery below the acceptance limit.   |
| 7                 | Surrogate recovery above the acceptance limit.   |
| B                 | Analyte was present in the associated method blank.  |
| BU                | Sample analyzed after holding time expired.  |
| BV                | Sample received after holding time expired.  |
| E                 | Concentration exceeds the calibration range.   |
| ET                | Sample was extracted past end of recommended max. holding time.  |
| HD                | The chromatographic pattern was inconsistent with the profile of the reference fuel standard.  |
| HDH               | The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).   |
| HDL               | The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).   |
| J                 | Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.  |
| JA                | Analyte positively identified but quantitation is an estimate.   |
| ME                | LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).   |
| ND                | Parameter not detected at the indicated reporting limit.   |
| Q                 | Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.  |
| SG                | The sample extract was subjected to Silica Gel treatment prior to analysis.  |
| X                 | % Recovery and/or RPD out-of-range.  |
| Z                 | Analyte presence was not confirmed by second column or GC/MS analysis.   |

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



# Chain of Custody Record

CatScience Environmental Lab  
5063 Commercial Circle, Suite II  
Concord, CA 94520  
Phone: 925-689-9022

Please send analytic results, electronic deliverables and the original chain-of-custody form to:  
labresults@weiss.com  
mec@weiss.com  
sab@weiss.com

## INSTRUCTIONS FOR LAB PERSONNEL:

GeoTracker EDF required? ☐ Yes ☒ No  
Equis 4-file EDWEDD required? ☒ Yes ☐ No  
Specify analytic/prep method and detection limit in report.  
Notify us of any anomalous peaks in GC or other scans.  
Call immediately with any questions or problems.


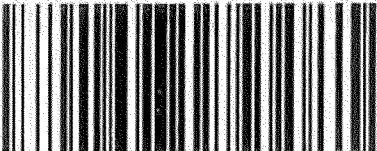
14-11-1863

|  |                       |                                    |              |  |               |   |  |  |  |  |  |  |  |                        |  |
|--|-----------------------|------------------------------------|--------------|--|---------------|---|--|--|--|--|--|--|--|------------------------|--|
| Client Contact   |                       | Project Manager: Scott Bourne      |              | Protocol ID/path: F3Levin Richmond03b_Sampling   |               |   |  |  |  |  |  |  |  | COC Number:            |  |
| Weiss Associates   |                       | Project ID: 426-2026.01 Task 1.1.3 |              | <div style="display: flex;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Analyze (Method ID)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Pesticides (EPA 8081A)</div> </div> |               |   |  |  |  |  |  |  |  | Page 1 of 1            |  |
| 2200 Powell Street, Suite 925  |                       | Sampled by: MEC                    |              |  |               |   |  |  |  |  |  |  |  | SDG number:            |  |
| Emeryville, CA 94608   |                       | Sample date(s): 11/20/14           |              |  |               |   |  |  |  |  |  |  |  | Sample Specific Notes: |  |
| (510) 450-6000 Phone   |                       | Analysis Turnaround Time:          |              |  |               |   |  |  |  |  |  |  |  |                        |  |
| (510) 547-5043 FAX   |                       | Standard                           |              |  |               |   |  |  |  |  |  |  |  |                        |  |
| Job Name: LRT 2014-2015 Annual Storm Water Sampling  |                       | (Specify Days or Hours)            |              |  |               |   |  |  |  |  |  |  |  |                        |  |
| Address: Levin Richmond Terminal,<br>402 Wright Avenue, Richmond, CA 94804   |                       |                                    |              |  |               |   |  |  |  |  |  |  |  |                        |  |
| Lab ID   | Sample Identification | Sample Date                        | Sample Time  | Sample Matrix  | # of Cont.    |   |  |  |  |  |  |  |  |                        |  |
| 1  | SW-4/5/6/7-112014     | 11/20/14                           | 1445         | W  | 2             |   |  |  |  |  |  |  |  |                        |  |
| 2  | SW-4/5/6/7-112014-dup | ↓                                  | 1450         | ↓  | ↓             |   |  |  |  |  |  |  |  |                        |  |
| 3  | SW-3-112014           | ↓                                  | 1535         | ↓  | ↓             |   |  |  |  |  |  |  |  |                        |  |
| Field Filtered (X):  |                       |                                    |              |  |               |   |  |  |  |  |  |  |  |                        |  |
| Preservation Used: 1= Ice, 2= HCl, 3= H <sub>2</sub> SO <sub>4</sub> , 4= HNO <sub>3</sub> , 5= NaOH, 6= Other   |                       |                                    |              |  |               | 1 |  |  |  |  |  |  |  |                        |  |
| Special Instructions/OC Requirements & Comments: Level II Report. Report with reporting limit and method detection limit. Please use agreed upon analytical methods for lowest detection limits. |                       |                                    |              |  |               |   |  |  |  |  |  |  |  |                        |  |
| Relinquished by:   | Company:              | Date/Time:                         | Received by: | Company:   | Date/Time:    |   |  |  |  |  |  |  |  |                        |  |
| Mary Cunningham  | Weiss                 | 11/21/14 1040                      | [Signature]  | ECI  | 11/21/14 1040 |   |  |  |  |  |  |  |  |                        |  |
| Relinquished by:   | Company:              | Date/Time:                         | Received by: | Company:   | Date/Time:    |   |  |  |  |  |  |  |  |                        |  |
| [Signature] TO GSD   | ECI                   | 11/21/14 1730                      | [Signature]  | ECI  | 11/22/14 0920 |   |  |  |  |  |  |  |  |                        |  |
| Relinquished by:   | Company:              | Date/Time:                         | Received by: | Company:   | Date/Time:    |   |  |  |  |  |  |  |  |                        |  |
|  |                       |                                    |              |  |               |   |  |  |  |  |  |  |  |                        |  |

☐ = Samples released to a secured, locked area.

● = Samples received from a secured, locked area

|   |   |             |
|---|---|-------------|
|  | <p><b>&lt; WebShip &gt; &gt; &gt; &gt;</b></p> <p><b>800-322-5555 www.gso.com</b></p> | <p>1863</p> |
|---|---|-------------|

|   |  |
|---|--|
| <p><b>Ship From:</b><br/>ALAN KEMP<br/>CAL SCIENCE- CONCORD<br/>5063 COMMERCIAL CIRCLE #H<br/>CONCORD, CA 94520</p> <p><b>Ship To:</b><br/>SAMPLE RECEIVING<br/>CEL<br/>7440 LINCOLN WAY<br/>GARDEN GROVE, CA 92841</p> <p><b>COD:</b><br/>\$0.00</p> <p><b>Reference:</b><br/>TERRA PACIFIC GROUP, WEISS, ARCADIS, PER,<br/>ETIC</p> <p><b>Delivery Instructions:</b></p> <p><b>Signature Type:</b><br/>SIGNATURE REQUIRED</p> | <p><b>Tracking #:</b> 526211907</p>  <p><b>SDS</b></p> <p><b>ORC</b></p> <p><b>GARDEN GROVE</b></p> <p><b>D92845A</b></p>  <p>31104542</p> <p><b>A</b></p> <p>Print Date : 11/21/14 14:43 PM</p> |
|---|--|

Package 1 of 1

|                       |   |               |        |
|-----------------------|---|---------------|--------|
| Send Label To Printer | <input checked="" type="checkbox"/> Print All | Edit Shipment | Finish |
|-----------------------|---|---------------|--------|

### LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.

STEP 2 - Fold this page in half.

STEP 3 - Securely attach this label to your package, do not cover the barcode.

STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

### ADDITIONAL OPTIONS:

|                      |                     |
|----------------------|---------------------|
| Send Label Via Email | Create Return Label |
|----------------------|---------------------|

### TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our liability for loss or damage to any package is limited to your actual damages or \$100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is \$500. For other shipments the highest declared value is \$10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is \$500. Items of "extraordinary value" include, but are not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

Calscience

WORK ORDER #: 14-11-7863

# SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Weiss

DATE: 11/22/14

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 3.1 °C - 0.2 °C (CF) = 2.9 °C ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter

Checked by: 802

## CUSTODY SEALS INTACT:

☒ Cooler ☐ \_\_\_\_\_

☐ No (Not Intact)

☐ Not Present

☐ N/A

Checked by: 802
☐ Sample ☐ \_\_\_\_\_

☐ No (Not Intact)

☒ Not Present

Checked by: 802

## SAMPLE CONDITION:

|   | Yes                                 | No                       | N/A                      |
|---|-------------------------------------|--------------------------|--------------------------|
| Chain-Of-Custody (COC) document(s) received with samples..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| COC document(s) received complete.....                        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.

☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.

|                                      |                                     |                          |                          |
|--------------------------------------|-------------------------------------|--------------------------|--------------------------|
| Sampler's name indicated on COC..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------------------|-------------------------------------|--------------------------|--------------------------|

|  |                                     |                          |                          |
|--|-------------------------------------|--------------------------|--------------------------|
| Sample container label(s) consistent with COC..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|-------------------------------------|--------------------------|--------------------------|

|  |                                     |                          |                          |
|--|-------------------------------------|--------------------------|--------------------------|
| Sample container(s) intact and good condition..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|-------------------------------------|--------------------------|--------------------------|

|   |                                     |                          |                          |
|---|-------------------------------------|--------------------------|--------------------------|
| Proper containers and sufficient volume for analyses requested..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|-------------------------------------|--------------------------|--------------------------|

|  |                                     |                          |                          |
|--|-------------------------------------|--------------------------|--------------------------|
| Analyses received within holding time..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|-------------------------------------|--------------------------|--------------------------|

Aqueous samples received within 15-minute holding time

|   |                          |                          |                                     |
|---|--------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen..... | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|

|   |                                     |                          |                          |
|---|-------------------------------------|--------------------------|--------------------------|
| Proper preservation noted on COC or sample container..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|-------------------------------------|--------------------------|--------------------------|

☐ Unpreserved vials received for Volatiles analysis

|   |                          |                          |                                     |
|---|--------------------------|--------------------------|-------------------------------------|
| Volatile analysis container(s) free of headspace..... | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|

|   |                          |                          |                                     |
|---|--------------------------|--------------------------|-------------------------------------|
| Tedlar bag(s) free of condensation..... | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|

## CONTAINER TYPE:

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (\_\_\_\_) ☐ EnCores® ☐ TerraCores® ☐ \_\_\_\_\_

Aqueous: ☐ VOA ☐ VOA<sub>h</sub> ☐ VOA<sub>na2</sub> ☐ 125AGB ☐ 125AGB<sub>h</sub> ☐ 125AGB<sub>p</sub> ☒ 1AGB ☐ 1AGB<sub>na2</sub> ☐ 1AGBs

☐ 500AGB ☐ 500AGJ ☐ 500AGJs ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 1PB ☐ 1PB<sub>na</sub> ☐ 500PB

☐ 250PB ☐ 250PB<sub>n</sub> ☐ 125PB ☐ 125PB<sub>znna</sub> ☐ 100PJ ☐ 100PJ<sub>na2</sub> ☐ \_\_\_\_\_ ☐ \_\_\_\_\_ ☐ \_\_\_\_\_

Air: ☐ Tedlar® ☐ Canister Other: ☐ \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: 802

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 776

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>: Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure znna: ZnAc<sub>2</sub>+NaOH f: Filtered Scanned by: 776

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-61632-1

Client Project/Site: LRTC 2014-2015 Annual Stormwater

For:

Weiss Associates

2200 Powell Street

Suite 925

Emeryville, California 94608

Attn: Mary Cunningham



Authorized for release by:

12/10/2014 6:00:52 PM

Micah Smith, Project Manager II

(925)484-1919

[micah.smith@testamericainc.com](mailto:micah.smith@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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1. The first step in the process is to identify the problem. This involves gathering information about the situation and understanding the needs of the stakeholders involved.

2. The second step is to analyze the problem. This involves breaking down the problem into smaller, more manageable parts and identifying the causes and effects.

3. The third step is to develop a plan. This involves identifying the goals and objectives of the project and determining the resources and actions needed to achieve them.

4. The fourth step is to implement the plan. This involves putting the plan into action and monitoring progress.

5. The fifth step is to evaluate the results. This involves comparing the actual results with the expected results and identifying areas for improvement.

6. The sixth step is to communicate the results. This involves sharing the findings of the project with the stakeholders and providing feedback.

7. The seventh step is to reflect on the process. This involves thinking about what worked well and what could be improved in the future.

8. The eighth step is to document the results. This involves creating a report or other form of documentation that captures the findings of the project.

9. The ninth step is to share the results. This involves presenting the findings of the project to the stakeholders and providing feedback.

10. The tenth step is to evaluate the results. This involves comparing the actual results with the expected results and identifying areas for improvement.

11. The eleventh step is to communicate the results. This involves sharing the findings of the project with the stakeholders and providing feedback.

12. The twelfth step is to reflect on the process. This involves thinking about what worked well and what could be improved in the future.

13. The thirteenth step is to document the results. This involves creating a report or other form of documentation that captures the findings of the project.

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**QUESTION**

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| Section 1 |             |                 |       |      |         |             |          |            |         |
|-----------|-------------|-----------------|-------|------|---------|-------------|----------|------------|---------|
| Item      | Category    | Sub-category    | Value | Unit | Notes   | Location    | Quantity | Unit Price | Total   |
| Item 1    | Category 1  | Sub-category 1  | 100   | kg   | 100 kg  | Warehouse A | 100      | 1.00       | 100.00  |
| Item 2    | Category 2  | Sub-category 2  | 200   | kg   | 200 kg  | Warehouse B | 200      | 1.00       | 200.00  |
| Item 3    | Category 3  | Sub-category 3  | 300   | kg   | 300 kg  | Warehouse C | 300      | 1.00       | 300.00  |
| Item 4    | Category 4  | Sub-category 4  | 400   | kg   | 400 kg  | Warehouse D | 400      | 1.00       | 400.00  |
| Item 5    | Category 5  | Sub-category 5  | 500   | kg   | 500 kg  | Warehouse E | 500      | 1.00       | 500.00  |
| Item 6    | Category 6  | Sub-category 6  | 600   | kg   | 600 kg  | Warehouse F | 600      | 1.00       | 600.00  |
| Item 7    | Category 7  | Sub-category 7  | 700   | kg   | 700 kg  | Warehouse G | 700      | 1.00       | 700.00  |
| Item 8    | Category 8  | Sub-category 8  | 800   | kg   | 800 kg  | Warehouse H | 800      | 1.00       | 800.00  |
| Item 9    | Category 9  | Sub-category 9  | 900   | kg   | 900 kg  | Warehouse I | 900      | 1.00       | 900.00  |
| Item 10   | Category 10 | Sub-category 10 | 1000  | kg   | 1000 kg | Warehouse J | 1000     | 1.00       | 1000.00 |





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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
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|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

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The diagram illustrates the experimental setup. A participant is seated at a table, looking at a computer screen. The screen displays a sequence of stimuli: a fixation cross, a target stimulus, and a distractor stimulus. The participant's response is recorded via a button press.

The diagram shows a single cell on the left and a chain of three cells on the right. Each cell is a rectangle with a dashed line inside, representing a cell wall. The cells are connected by horizontal lines.

| Section 1: General Information |  |  |  |  |                     |  |  |  |  | Section 2: Financial Data |  |  |  |  |          |  |  |  |  | Section 3: Operational Metrics |  |  |  |  |              |  |  |  |  | Section 4: Compliance & Legal |  |  |  |  |                  |  |  |  |  | Section 5: Human Resources |  |  |  |  |                |  |  |  |  |
|--------------------------------|--|--|--|--|---------------------|--|--|--|--|---------------------------|--|--|--|--|----------|--|--|--|--|--------------------------------|--|--|--|--|--------------|--|--|--|--|-------------------------------|--|--|--|--|------------------|--|--|--|--|----------------------------|--|--|--|--|----------------|--|--|--|--|
| Item ID                        |  |  |  |  | Description         |  |  |  |  | Revenue                   |  |  |  |  | Expenses |  |  |  |  | Profit                         |  |  |  |  | Sales Volume |  |  |  |  | Production Volume             |  |  |  |  | Inventory Levels |  |  |  |  | Legal Filings              |  |  |  |  | Employee Count |  |  |  |  |
| 001                            |  |  |  |  | Product A - Q1 2023 |  |  |  |  | 1000                      |  |  |  |  | 500      |  |  |  |  | 500                            |  |  |  |  | 1000         |  |  |  |  | 1000                          |  |  |  |  | 1000             |  |  |  |  | 1000                       |  |  |  |  | 1000           |  |  |  |  |
| 002                            |  |  |  |  | Product B - Q1 2023 |  |  |  |  | 1200                      |  |  |  |  | 600      |  |  |  |  | 600                            |  |  |  |  | 1200         |  |  |  |  | 1200                          |  |  |  |  | 1200             |  |  |  |  | 1200                       |  |  |  |  | 1200           |  |  |  |  |
| 003                            |  |  |  |  | Product C - Q1 2023 |  |  |  |  | 800                       |  |  |  |  | 400      |  |  |  |  | 400                            |  |  |  |  | 800          |  |  |  |  | 800                           |  |  |  |  | 800              |  |  |  |  | 800                        |  |  |  |  | 800            |  |  |  |  |
| 004                            |  |  |  |  | Product D - Q1 2023 |  |  |  |  | 900                       |  |  |  |  | 450      |  |  |  |  | 450                            |  |  |  |  | 900          |  |  |  |  | 900                           |  |  |  |  | 900              |  |  |  |  | 900                        |  |  |  |  | 900            |  |  |  |  |
| 005                            |  |  |  |  | Product E - Q1 2023 |  |  |  |  | 1100                      |  |  |  |  | 550      |  |  |  |  | 550                            |  |  |  |  | 1100         |  |  |  |  | 1100                          |  |  |  |  | 1100             |  |  |  |  | 1100                       |  |  |  |  | 1100           |  |  |  |  |
| 006                            |  |  |  |  | Product F - Q1 2023 |  |  |  |  | 700                       |  |  |  |  | 350      |  |  |  |  | 350                            |  |  |  |  | 700          |  |  |  |  | 700                           |  |  |  |  | 700              |  |  |  |  | 700                        |  |  |  |  | 700            |  |  |  |  |
| 007                            |  |  |  |  | Product G - Q1 2023 |  |  |  |  | 1300                      |  |  |  |  | 650      |  |  |  |  | 650                            |  |  |  |  | 1300         |  |  |  |  | 1300                          |  |  |  |  | 1300             |  |  |  |  | 1300                       |  |  |  |  | 1300           |  |  |  |  |
| 008                            |  |  |  |  | Product H - Q1 2023 |  |  |  |  | 600                       |  |  |  |  | 300      |  |  |  |  | 300                            |  |  |  |  | 600          |  |  |  |  | 600                           |  |  |  |  | 600              |  |  |  |  | 600                        |  |  |  |  | 600            |  |  |  |  |
| 009                            |  |  |  |  | Product I - Q1 2023 |  |  |  |  | 1400                      |  |  |  |  | 700      |  |  |  |  | 700                            |  |  |  |  | 1400         |  |  |  |  | 1400                          |  |  |  |  | 1400             |  |  |  |  | 1400                       |  |  |  |  | 1400           |  |  |  |  |
| 010                            |  |  |  |  | Product J - Q1 2023 |  |  |  |  | 500                       |  |  |  |  | 250      |  |  |  |  | 250                            |  |  |  |  | 500          |  |  |  |  | 500                           |  |  |  |  | 500              |  |  |  |  | 500                        |  |  |  |  | 500            |  |  |  |  |

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Figure 1 consists of two schematic diagrams. Diagram (a) shows a side view of the experimental setup. A subject is seated at a table, looking at a computer monitor. On the table, there is a response box and a stimulus box. The stimulus box contains a grid of numbers. Diagram (b) shows a top-down view of the stimulus box. It is a rectangular box divided into a 4x4 grid of 16 smaller squares. Each square contains a number from 1 to 16, arranged in a specific pattern. The numbers are: 1, 2, 3, 4 in the first row; 5, 6, 7, 8 in the second row; 9, 10, 11, 12 in the third row; and 13, 14, 15, 16 in the fourth row.

| 100 |  |  |  |  |  |  |  |  |  |
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720-61632

### Chain of Custody Record

**TestAmerica**  
1220 Quarry Lane  
Pleasanton, CA 94566  
Phone: 925-484-1919 ext.137

Please send analytic results, electronic deliverables and the original chain-of-custody form to:

labresults@weiss.com  
mec@weiss.com  
sab@weiss.com

**INSTRUCTIONS FOR LAB PERSONNEL:**

GeoTracker EDF required? ☐ Yes ☒ No  
Equis 4-file EDWEDD required? ☒ Yes ☐ No  
Specify analytic/prep method and detection limit in report  
Notify us of any anomalous peaks in GC or other scans  
Call immediately with any questions or problems

157974

| Client Contact  |                       |  |  |  |  | Project Manager: Scott Bourne  |             |               |            |   |   | Protocol ID/path: J\Levin Richmond\03b_Sampling   |   |   |  |  |  | COC Number:              |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
|---|-----------------------|--|--|--|--|--|-------------|---------------|------------|---|---|---|---|---|--|--|--|--------------------------|--|--|--|--|--|-------------|--|--|--|--|------------------------|-------------------------|--|--|--|--|--|
| Weiss Associates  |                       |  |  |  |  | Project ID: 426-2026.01 Task L1.3  |             |               |            |   |   | <div style="display: flex; justify-content: space-between;"> <div> <p>Analyte (Method ID)</p> <p>pH (EPA-9003)</p> <p>Specific Conductance (SM 2510B)</p> <p>Total Suspended Solids (SM 2540D)</p> <p>Oil &amp; Grease (EPA 1664A SGT-HIEM)</p> <p>Total Metals - Al,Cu,Fe,Ni,Pb,Zn (EPA 200.8 ICP-MS)</p> </div> <div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div> </div> |   |   |  |  |  | Page 1 of 1              |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| 2200 Powell Street, Suite 925   |                       |  |  |  |  | Sampled by: M Cunningham   |             |               |            |   |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| Emeryville, CA 94608  |                       |  |  |  |  | Sample date(s): 12/2/14  |             |               |            |   |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| (510) 450-6000 Phone  |                       |  |  |  |  | Analysis Turnaround Time:<br><br>Standard<br><br>(Specify Days or Hours) |             |               |            |   |   |   |   |   |  |  |  |                          |  |  |  |  |  | SDG number: |  |  |  |  |                        |                         |  |  |  |  |  |
| (510) 547-5043 FAX  |                       |  |  |  |  |  |             |               |            |   |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| Job Name: LRT 2014-2015 Annual Storm Water Sampling   |                       |  |  |  |  |  |             |               |            |   |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| Address: Levin Richmond Terminal,<br>402 Wright Avenue, Richmond, CA 94804  |                       |  |  |  |  |  |             |               |            |   |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| Lab ID  | Sample Identification |  |  |  |  | Sample Date  | Sample Time | Sample Matrix | # of Cont. |   |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  | Sample Specific Notes: |                         |  |  |  |  |  |
| 1   | SW-11-120214          |  |  |  |  | 12/02/14   | 1055        | W             | 5          | ✓   | ✓ | ✓   | ✓ | ✓ |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| 2   | SW-12-120214          |  |  |  |  | ↓  | 1300        | ↓             | 5          |   |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| 3   | SW-3-120214           |  |  |  |  |  | 1145        |               | 5          |   |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| 4   | SW-3-120214-dup       |  |  |  |  |  | 1140        |               | 5          |   |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| 5   | SW-4/5/6/7-120214     |  |  |  |  |  | 1130        |               | 5          |   |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| 6   | SHEET-2-120214        |  |  |  |  |  | 1110        |               | 1          |   |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| 7   | TSI-E-120214          |  |  |  |  |  | 1210        |               | 5          |   | ✓ | ✓   | ✓ | ✓ |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
|   |                       |  |  |  |  |  |             |               |            | Field Filtered (X):   |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| Preservation Used: 1= Ice, 2= HCl; 3= H <sub>2</sub> SO <sub>4</sub> ; 4= HNO <sub>3</sub> ; 5= NaOH; 6= Other _____  |                       |  |  |  |  |  |             |               |            | <div style="display: flex; justify-content: space-around;"> <span>1</span><span>1</span><span>1,2</span><span>1,4</span><span>1</span><span>1</span><span>1</span><span>1</span><span>1</span><span>1</span><span>1</span><span>1</span><span>1</span><span>1</span><span>1</span><span>1</span><span>1</span><span>1</span><span>1</span> </div> |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| Special Instructions/OC Requirements & Comments: Level II Report. Report with reporting limit and method detection limit. Analyze and report only the metals listed above (Al, Cu, Fe, Ni, Pb, and Zn). |                       |  |  |  |  |  |             |               |            |   |   |   |   |   |  |  |  |                          |  |  |  |  |  |             |  |  |  |  |                        |                         |  |  |  |  |  |
| Relinquished by: M Cunningham   |                       |  |  |  |  | Company: Weiss Associates  |             |               |            |   |   | Date/Time: 12/3/14 1030   |   |   |  |  |  | Received by: [Signature] |  |  |  |  |  | Company: TA |  |  |  |  |                        | Date/Time: 12-3-14 1030 |  |  |  |  |  |
| Relinquished by: [Signature]  |                       |  |  |  |  | Company: TA  |             |               |            |   |   | Date/Time: 12-3-14 1743   |   |   |  |  |  | Received by: [Signature] |  |  |  |  |  | Company: TA |  |  |  |  |                        | Date/Time: 12-3-14 1743 |  |  |  |  |  |
| Relinquished by:  |                       |  |  |  |  | Company:   |             |               |            |   |   | Date/Time:  |   |   |  |  |  | Received by:             |  |  |  |  |  | Company:    |  |  |  |  |                        | Date/Time:              |  |  |  |  |  |

☒ = Samples released to a secured, locked area.

● = Samples received from a secured, locked area

0.1°C

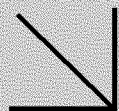
| QUESTION   | ANSWER  |
|--|---|
| What is the primary purpose of a business plan?                        | To provide a clear picture of the business and its future goals.  |
| What are the key components of a business plan?                        | Executive Summary, Company Description, Market Analysis, Financial Projections, and Management Team.                                  |
| How often should a business plan be updated?                           | At least annually, or more frequently if the business is in a rapidly changing market.  |
| What is the importance of a market analysis?                           | It helps identify the target market, understand customer needs, and assess the competitive landscape.                                 |
| How can a business plan help in securing funding?                      | It provides a detailed overview of the business's financial needs and projections, which is essential for investors and lenders.      |
| What are the common mistakes to avoid when creating a business plan?   | Lack of research, unrealistic financial projections, and poor organization.   |
| How can a business plan be used as a tool for communication?           | It can be used to communicate the business's vision and goals to stakeholders, including employees, investors, and partners.          |
| What is the role of a business plan in strategic planning?             | It serves as a foundation for developing a strategic plan, which outlines the long-term goals and the actions needed to achieve them. |
| How can a business plan be used to monitor progress?                   | By comparing actual performance against the projections and goals outlined in the plan.   |
| What are the benefits of having a business plan?                       | It provides a clear direction, helps in identifying potential risks, and serves as a tool for communication and decision-making.      |
| How can a business plan be used to attract talent?                     | It can be used to demonstrate the business's potential and the opportunities available for employees.                                 |
| What is the importance of a financial plan?                            | It provides a detailed overview of the business's financial health and helps in identifying areas for improvement.                    |
| How can a business plan be used to manage risk?                        | By identifying potential risks and developing strategies to mitigate them.  |
| What are the key factors to consider when developing a business plan?  | Market research, financial projections, and a clear understanding of the business's goals and objectives.                             |
| How can a business plan be used to improve operational efficiency?     | By identifying areas for improvement and developing strategies to optimize resources.   |
| What is the role of a business plan in fundraising?                    | It provides a detailed overview of the business's financial needs and projections, which is essential for raising capital.            |
| How can a business plan be used to build a strong brand?               | By clearly defining the brand's identity and values, and communicating them effectively.  |
| What are the common challenges faced when creating a business plan?    | Lack of data, unrealistic assumptions, and poor communication.  |
| How can a business plan be used to improve customer satisfaction?      | By understanding customer needs and developing strategies to meet them.   |
| What is the importance of a marketing plan?                            | It provides a detailed overview of the business's marketing strategy and helps in identifying areas for improvement.                  |
| How can a business plan be used to manage cash flow?                   | By identifying potential cash flow issues and developing strategies to manage them.   |
| What are the key elements of a successful business plan?               | Clear goals, realistic projections, and a strong management team.   |
| How can a business plan be used to improve employee performance?       | By providing a clear vision and goals, and developing strategies to motivate and support employees.                                   |
| What is the role of a business plan in innovation?                     | It provides a framework for developing and testing new ideas and products.  |
| How can a business plan be used to improve supply chain management?    | By identifying potential supply chain risks and developing strategies to mitigate them.   |
| What are the common pitfalls to avoid when creating a business plan?   | Lack of research, unrealistic projections, and poor organization.   |
| How can a business plan be used to improve financial management?       | By providing a detailed overview of the business's financial health and helping in identifying areas for improvement.                 |
| What is the importance of a legal plan?                                | It provides a detailed overview of the business's legal requirements and helps in identifying areas for improvement.                  |
| How can a business plan be used to improve human resources management? | By providing a clear vision and goals, and developing strategies to attract, develop, and retain talent.                              |
| What are the key factors to consider when developing a business plan?  | Market research, financial projections, and a clear understanding of the business's goals and objectives.                             |
| How can a business plan be used to improve operational efficiency?     | By identifying areas for improvement and developing strategies to optimize resources.   |
| What is the role of a business plan in fundraising?                    | It provides a detailed overview of the business's financial needs and projections, which is essential for raising capital.            |
| How can a business plan be used to build a strong brand?               | By clearly defining the brand's identity and values, and communicating them effectively.  |
| What are the common challenges faced when creating a business plan?    | Lack of data, unrealistic assumptions, and poor communication.  |
| How can a business plan be used to improve customer satisfaction?      | By understanding customer needs and developing strategies to meet them.   |
| What is the importance of a marketing plan?                            | It provides a detailed overview of the business's marketing strategy and helps in identifying areas for improvement.                  |
| How can a business plan be used to manage cash flow?                   | By identifying potential cash flow issues and developing strategies to manage them.   |
| What are the key elements of a successful business plan?               | Clear goals, realistic projections, and a strong management team.   |
| How can a business plan be used to improve employee performance?       | By providing a clear vision and goals, and developing strategies to motivate and support employees.                                   |
| What is the role of a business plan in innovation?                     | It provides a framework for developing and testing new ideas and products.  |
| How can a business plan be used to improve supply chain management?    | By identifying potential supply chain risks and developing strategies to mitigate them.   |
| What are the common pitfalls to avoid when creating a business plan?   | Lack of research, unrealistic projections, and poor organization.   |
| How can a business plan be used to improve financial management?       | By providing a detailed overview of the business's financial health and helping in identifying areas for improvement.                 |
| What is the importance of a legal plan?                                | It provides a detailed overview of the business's legal requirements and helps in identifying areas for improvement.                  |
| How can a business plan be used to improve human resources management? | By providing a clear vision and goals, and developing strategies to attract, develop, and retain talent.                              |



ED\_000946\_00000047-00143



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**WORK ORDER NUMBER: 14-12-1377***The difference is service*

AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For****Client:** Weiss Associates**Client Project Name:** LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3**Attention:** Scott Bourne  
2200 Powell Street  
Suite 925  
Emeryville, CA 94608-1879

Approved for release on 12/23/2014 by:  
Virendra Patel  
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Client Project Name: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3  
 Work Order Number: 14-12-1377

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## Work Order Narrative

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**Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 12/13/14. They were assigned to Work Order 14-12-1377.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.





## Sample Summary

---

|                               |   |
|-------------------------------|---|
| Client: Weiss Associates      | Work Order: 14-12-1377                                    |
| 2200 Powell Street, Suite 925 | Project Name: LRT 2014-2015 Annual Storm Water Sampling / |
| Emeryville, CA 94608-1879     | 426-2026.01 Task 1.1.3                                    |
|                               | PO Number:  |
|                               | Date/Time Received: 12/13/14 09:00                        |
|                               | Number of Containers: 4                                   |

Attn: Scott Bourne

---

| Sample Identification | Lab Number   | Collection Date and Time | Number of Containers | Matrix  |
|-----------------------|--------------|--------------------------|----------------------|---------|
| SW-3-121114           | 14-12-1377-1 | 12/11/14 08:40           | 2                    | Aqueous |
| SW-4/5/6/7-121114     | 14-12-1377-2 | 12/11/14 08:46           | 2                    | Aqueous |

  
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## Detections Summary

Client: Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Work Order: 14-12-1377  
Project Name: LRT 2014-2015 Annual Storm Water Sampling /  
426-2026.01 Task 1.1.3  
Received: 12/13/14

Attn: Scott Bourne

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### Client SampleID

| <u>Analyte</u>                   | <u>Result</u> | <u>Qualifiers</u> | <u>RL</u> | <u>Units</u> | <u>Method</u> | <u>Extraction</u> |
|----------------------------------|---------------|-------------------|-----------|--------------|---------------|-------------------|
| SW-3-121114 (14-12-1377-1)       |               |                   |           |              |               |                   |
| 4,4'-DDD                         | 2.3           |                   | 2.2       | ng/L         | EPA 8081A     | EPA 3510C         |
| 4,4'-DDT                         | 3.9           |                   | 2.2       | ng/L         | EPA 8081A     | EPA 3510C         |
| Endosulfan I                     | 0.030         | J                 | 0.026*    | ug/L         | EPA 8081A     | EPA 3510C         |
| SW-4/5/6/7-121114 (14-12-1377-2) |               |                   |           |              |               |                   |
| 4,4'-DDD                         | 3.3           |                   | 1.9       | ng/L         | EPA 8081A     | EPA 3510C         |
| 4,4'-DDT                         | 4.9           |                   | 1.9       | ng/L         | EPA 8081A     | EPA 3510C         |

Subcontracted analyses, if any, are not included in this summary.

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\* MDL is shown

## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/13/14  
Work Order: 14-12-1377  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ug/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| SW-3-121114          | 14-12-1377-1-B    | 12/11/14<br>08:40   | Aqueous | GC 51      | 12/15/14      | 12/19/14<br>19:12  | 141215L04   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL    | MDL   | DF   | Qualifiers |
|--------------------|--------|-------|-------|------|------------|
| Alpha-BHC          | ND     | 0.095 | 0.027 | 1.00 |            |
| Beta-BHC           | ND     | 0.095 | 0.029 | 1.00 |            |
| Delta-BHC          | ND     | 0.095 | 0.027 | 1.00 |            |
| Endosulfan I       | 0.030  | 0.095 | 0.026 | 1.00 | J          |
| Endrin Aldehyde    | ND     | 0.095 | 0.025 | 1.00 |            |
| Endosulfan II      | ND     | 0.095 | 0.026 | 1.00 |            |
| Endosulfan Sulfate | ND     | 0.095 | 0.028 | 1.00 |            |
| Methoxychlor       | ND     | 0.095 | 0.024 | 1.00 |            |
| Chlordane          | ND     | 0.95  | 0.31  | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 90       | 50-135         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 83       | 50-135         |            |

| SW-4/5/6/7-121114 | 14-12-1377-2-B | 12/11/14<br>08:46 | Aqueous | GC 51 | 12/15/14 | 12/19/14<br>18:58 | 141215L04 |
|-------------------|----------------|-------------------|---------|-------|----------|-------------------|-----------|
|-------------------|----------------|-------------------|---------|-------|----------|-------------------|-----------|

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL    | MDL   | DF   | Qualifiers |
|--------------------|--------|-------|-------|------|------------|
| Alpha-BHC          | ND     | 0.095 | 0.027 | 1.00 |            |
| Beta-BHC           | ND     | 0.095 | 0.029 | 1.00 |            |
| Delta-BHC          | ND     | 0.095 | 0.027 | 1.00 |            |
| Endosulfan I       | ND     | 0.095 | 0.026 | 1.00 |            |
| Endrin Aldehyde    | ND     | 0.095 | 0.025 | 1.00 |            |
| Endosulfan II      | ND     | 0.095 | 0.026 | 1.00 |            |
| Endosulfan Sulfate | ND     | 0.095 | 0.028 | 1.00 |            |
| Methoxychlor       | ND     | 0.095 | 0.024 | 1.00 |            |
| Chlordane          | ND     | 0.95  | 0.31  | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 85       | 50-135         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 86       | 50-135         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/13/14  
Work Order: 14-12-1377  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ug/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-  
2026.01 Task 1.1.3

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| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| Method Blank         | 099-12-529-763    | N/A                 | Aqueous | GC 51      | 12/15/14      | 12/16/14<br>13:01  | 141215L04   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL   | MDL   | DF   | Qualifiers |
|--------------------|--------|------|-------|------|------------|
| Alpha-BHC          | ND     | 0.10 | 0.028 | 1.00 |            |
| Beta-BHC           | ND     | 0.10 | 0.030 | 1.00 |            |
| Delta-BHC          | ND     | 0.10 | 0.029 | 1.00 |            |
| Endosulfan I       | ND     | 0.10 | 0.028 | 1.00 |            |
| Endrin Aldehyde    | ND     | 0.10 | 0.026 | 1.00 |            |
| Endosulfan II      | ND     | 0.10 | 0.027 | 1.00 |            |
| Endosulfan Sulfate | ND     | 0.10 | 0.029 | 1.00 |            |
| Methoxychlor       | ND     | 0.10 | 0.025 | 1.00 |            |
| Chlordane          | ND     | 1.0  | 0.33  | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 92       | 50-135         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 72       | 50-135         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/13/14  
Work Order: 14-12-1377  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-  
2026.01 Task 1.1.3

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| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| SW-3-121114          | 14-12-1377-1-A    | 12/11/14<br>08:40   | Aqueous | GC 44      | 12/15/14      | 12/19/14<br>14:16  | 141215L17   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL  | MDL  | DF   | Qualifiers |
|--------------------|--------|-----|------|------|------------|
| Aldrin             | ND     | 2.2 | 0.35 | 1.00 |            |
| 4,4'-DDD           | 2.3    | 2.2 | 0.59 | 1.00 |            |
| 4,4'-DDE           | ND     | 2.2 | 0.51 | 1.00 |            |
| 4,4'-DDT           | 3.9    | 2.2 | 0.59 | 1.00 |            |
| Alpha Chlordane    | ND     | 2.2 | 0.53 | 1.00 |            |
| Dieldrin           | ND     | 2.2 | 0.59 | 1.00 |            |
| Gamma Chlordane    | ND     | 2.2 | 0.53 | 1.00 |            |
| Toxaphene          | ND     | 27  | 8.9  | 1.00 |            |
| Endrin             | ND     | 2.2 | 0.33 | 1.00 |            |
| Gamma-BHC          | ND     | 2.2 | 0.50 | 1.00 |            |
| Heptachlor         | ND     | 2.2 | 0.39 | 1.00 |            |
| Heptachlor Epoxide | ND     | 2.2 | 0.36 | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 98       | 50-150         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 80       | 50-150         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/13/14  
Work Order: 14-12-1377  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-  
2026.01 Task 1.1.3

Page 2 of 3

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| SW-4/5/6/7-121114    | 14-12-1377-2-A    | 12/11/14<br>08:46   | Aqueous | GC 44      | 12/15/14      | 12/19/14<br>14:30  | 141215L17   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL  | MDL  | DF   | Qualifiers |
|--------------------|--------|-----|------|------|------------|
| Aldrin             | ND     | 1.9 | 0.31 | 1.00 |            |
| 4,4'-DDD           | 3.3    | 1.9 | 0.52 | 1.00 |            |
| 4,4'-DDE           | ND     | 1.9 | 0.46 | 1.00 |            |
| 4,4'-DDT           | 4.9    | 1.9 | 0.53 | 1.00 |            |
| Alpha Chlordane    | ND     | 1.9 | 0.47 | 1.00 |            |
| Dieldrin           | ND     | 1.9 | 0.52 | 1.00 |            |
| Gamma Chlordane    | ND     | 1.9 | 0.47 | 1.00 |            |
| Toxaphene          | ND     | 24  | 7.9  | 1.00 |            |
| Endrin             | ND     | 1.9 | 0.30 | 1.00 |            |
| Gamma-BHC          | ND     | 1.9 | 0.44 | 1.00 |            |
| Heptachlor         | ND     | 1.9 | 0.34 | 1.00 |            |
| Heptachlor Epoxide | ND     | 1.9 | 0.32 | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 70       | 50-150         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 64       | 50-150         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/13/14  
Work Order: 14-12-1377  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-  
2026.01 Task 1.1.3

Page 3 of 3

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| Method Blank         | 099-16-036-15     | N/A                 | Aqueous | GC 44      | 12/15/14      | 12/19/14<br>14:02  | 141215L17   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL  | MDL  | DF   | Qualifiers |
|--------------------|--------|-----|------|------|------------|
| Aldrin             | ND     | 2.0 | 0.33 | 1.00 |            |
| 4,4'-DDD           | ND     | 2.0 | 0.55 | 1.00 |            |
| 4,4'-DDE           | ND     | 2.0 | 0.48 | 1.00 |            |
| 4,4'-DDT           | ND     | 2.0 | 0.55 | 1.00 |            |
| Alpha Chlordane    | ND     | 2.0 | 0.49 | 1.00 |            |
| Dieldrin           | ND     | 2.0 | 0.55 | 1.00 |            |
| Gamma Chlordane    | ND     | 2.0 | 0.49 | 1.00 |            |
| Toxaphene          | ND     | 25  | 8.2  | 1.00 |            |
| Endrin             | ND     | 2.0 | 0.31 | 1.00 |            |
| Gamma-BHC          | ND     | 2.0 | 0.46 | 1.00 |            |
| Heptachlor         | ND     | 2.0 | 0.36 | 1.00 |            |
| Heptachlor Epoxide | ND     | 2.0 | 0.34 | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 119      | 50-150         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 97       | 50-150         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - LCS/LCSD

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/13/14  
Work Order: 14-12-1377  
Preparation: EPA 3510C  
Method: EPA 8081A

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

| Quality Control Sample ID | Type | Matrix  | Instrument | Date Prepared | Date Analyzed  | LCS/LCSD Batch Number |
|---------------------------|------|---------|------------|---------------|----------------|-----------------------|
| 099-12-529-763            | LCS  | Aqueous | GC 51      | 12/15/14      | 12/16/14 13:16 | 141215L04             |
| 099-12-529-763            | LCSD | Aqueous | GC 51      | 12/15/14      | 12/16/14 12:47 | 141215L04             |

| Parameter          | Spike Added | LCS Conc. | LCS %Rec. | LCSD Conc. | LCSD %Rec. | %Rec. CL | ME CL  | RPD | RPD CL | Qualifiers |
|--------------------|-------------|-----------|-----------|------------|------------|----------|--------|-----|--------|------------|
| Alpha-BHC          | 0.5000      | 0.3526    | 71        | 0.3770     | 75         | 50-135   | 36-149 | 7   | 0-25   |            |
| Gamma-BHC          | 0.5000      | 0.4351    | 87        | 0.5036     | 101        | 50-135   | 36-149 | 15  | 0-25   |            |
| Beta-BHC           | 0.5000      | 0.4068    | 81        | 0.4097     | 82         | 50-135   | 36-149 | 1   | 0-25   |            |
| Heptachlor         | 0.5000      | 0.5166    | 103       | 0.5142     | 103        | 50-135   | 36-149 | 0   | 0-25   |            |
| Delta-BHC          | 0.5000      | 0.4398    | 88        | 0.4484     | 90         | 50-135   | 36-149 | 2   | 0-25   |            |
| Aldrin             | 0.5000      | 0.4957    | 99        | 0.4909     | 98         | 50-135   | 36-149 | 1   | 0-25   |            |
| Heptachlor Epoxide | 0.5000      | 0.4779    | 96        | 0.4720     | 94         | 50-135   | 36-149 | 1   | 0-25   |            |
| Endosulfan I       | 0.5000      | 0.5183    | 104       | 0.5087     | 102        | 50-135   | 36-149 | 2   | 0-25   |            |
| Dieldrin           | 0.5000      | 0.4974    | 99        | 0.4955     | 99         | 50-135   | 36-149 | 0   | 0-25   |            |
| 4,4'-DDE           | 0.5000      | 0.4530    | 91        | 0.4722     | 94         | 50-135   | 36-149 | 4   | 0-25   |            |
| Endrin             | 0.5000      | 0.5181    | 104       | 0.5295     | 106        | 50-135   | 36-149 | 2   | 0-25   |            |
| Endrin Aldehyde    | 0.5000      | 0.4444    | 89        | 0.4132     | 83         | 50-135   | 36-149 | 7   | 0-25   |            |
| 4,4'-DDD           | 0.5000      | 0.4877    | 98        | 0.4972     | 99         | 50-135   | 36-149 | 2   | 0-25   |            |
| Endosulfan II      | 0.5000      | 0.4809    | 96        | 0.4845     | 97         | 50-135   | 36-149 | 1   | 0-25   |            |
| 4,4'-DDT           | 0.5000      | 0.4566    | 91        | 0.4635     | 93         | 50-135   | 36-149 | 1   | 0-25   |            |
| Endosulfan Sulfate | 0.5000      | 0.4769    | 95        | 0.4822     | 96         | 50-135   | 36-149 | 1   | 0-25   |            |
| Methoxychlor       | 0.5000      | 0.5172    | 103       | 0.5259     | 105        | 50-135   | 36-149 | 2   | 0-25   |            |

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits





## Quality Control - LCS/LCSD

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/13/14  
Work Order: 14-12-1377  
Preparation: EPA 3510C  
Method: EPA 8081A

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 2

| Quality Control Sample ID | Type | Matrix  | Instrument | Date Prepared | Date Analyzed  | LCS/LCSD Batch Number |
|---------------------------|------|---------|------------|---------------|----------------|-----------------------|
| 099-16-036-15             | LCS  | Aqueous | GC 44      | 12/15/14      | 12/22/14 14:04 | 141215L17             |
| 099-16-036-15             | LCSD | Aqueous | GC 44      | 12/15/14      | 12/22/14 14:18 | 141215L17             |

| Parameter          | Spike Added | LCS Conc. | LCS %Rec. | LCSD Conc. | LCSD %Rec. | %Rec. CL | ME CL  | RPD | RPD CL | Qualifiers |
|--------------------|-------------|-----------|-----------|------------|------------|----------|--------|-----|--------|------------|
| Aldrin             | 50.00       | 38.21     | 76        | 37.79      | 76         | 50-150   | 33-167 | 1   | 0-25   |            |
| 4,4'-DDD           | 50.00       | 64.75     | 130       | 65.51      | 131        | 50-150   | 33-167 | 1   | 0-25   |            |
| 4,4'-DDE           | 50.00       | 60.80     | 122       | 61.76      | 124        | 50-150   | 33-167 | 2   | 0-25   |            |
| 4,4'-DDT           | 50.00       | 62.05     | 124       | 63.21      | 126        | 50-150   | 33-167 | 2   | 0-25   |            |
| Alpha Chlordane    | 50.00       | 54.09     | 108       | 55.01      | 110        | 50-150   | 33-167 | 2   | 0-25   |            |
| Dieldrin           | 50.00       | 65.14     | 130       | 65.89      | 132        | 50-150   | 33-167 | 1   | 0-25   |            |
| Gamma Chlordane    | 50.00       | 55.08     | 110       | 55.85      | 112        | 50-150   | 33-167 | 1   | 0-25   |            |
| Endrin             | 50.00       | 59.99     | 120       | 61.06      | 122        | 50-150   | 33-167 | 2   | 0-25   |            |
| Gamma-BHC          | 50.00       | 59.22     | 118       | 60.25      | 120        | 50-150   | 33-167 | 2   | 0-25   |            |
| Heptachlor         | 50.00       | 46.03     | 92        | 46.91      | 94         | 50-150   | 33-167 | 2   | 0-25   |            |
| Heptachlor Epoxide | 50.00       | 59.15     | 118       | 60.08      | 120        | 50-150   | 33-167 | 2   | 0-25   |            |

Total number of LCS compounds: 11

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Sample Analysis Summary Report

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Work Order: 14-12-1377Page 1 of 1

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| <u>Method</u> | <u>Extraction</u> | <u>Chemist ID</u> | <u>Instrument</u> | <u>Analytical Location</u> |
|---------------|-------------------|-------------------|-------------------|----------------------------|
| EPA 8081A     | EPA 3510C         | 421               | GC 44             | 1                          |
| EPA 8081A     | EPA 3510C         | 669               | GC 51             | 1                          |

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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

## Glossary of Terms and Qualifiers

Work Order: 14-12-1377

Page 1 of 1

| <u>Qualifiers</u> | <u>Definition</u>  |
|-------------------|--|
| *                 | See applicable analysis comment.   |
| <                 | Less than the indicated value.   |
| >                 | Greater than the indicated value.  |
| 1                 | Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.   |
| 2                 | Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification. |
| 3                 | Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.  |
| 4                 | The MS/MSD RPD was out of control due to suspected matrix interference.  |
| 5                 | The PDS/PDS or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.   |
| 6                 | Surrogate recovery below the acceptance limit.   |
| 7                 | Surrogate recovery above the acceptance limit.   |
| B                 | Analyte was present in the associated method blank.  |
| BU                | Sample analyzed after holding time expired.  |
| BV                | Sample received after holding time expired.  |
| E                 | Concentration exceeds the calibration range.   |
| ET                | Sample was extracted past end of recommended max. holding time.  |
| HD                | The chromatographic pattern was inconsistent with the profile of the reference fuel standard.  |
| HDH               | The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).   |
| HDL               | The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).   |
| J                 | Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.  |
| JA                | Analyte positively identified but quantitation is an estimate.   |
| ME                | LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).   |
| ND                | Parameter not detected at the indicated reporting limit.   |
| Q                 | Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.  |
| SG                | The sample extract was subjected to Silica Gel treatment prior to analysis.  |
| X                 | % Recovery and/or RPD out-of-range.  |
| Z                 | Analyte presence was not confirmed by second column or GC/MS analysis.   |

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



1377



< WebShip > > > > >

800-322-5555 www.gso.com

Ship From:  
ALAN KEMP  
CAL SCIENCE- CONCORD  
5063 COMMERCIAL CIRCLE #H  
CONCORD, CA 94520

Ship To:  
SAMPLE RECEIVING  
CEL  
7440 LINCOLN WAY  
GARDEN GROVE, CA 92841

COD:  
\$0.00

Reference:  
TERRA PACIFIC GROUP, CARDNO ERI, WEISS,  
SCHNITZER

Delivery Instructions:

Signature Type:  
SIGNATURE REQUIRED

Tracking #: 526383285



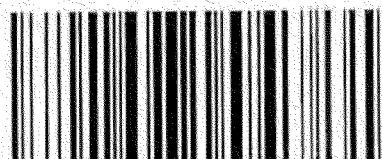
SDS

ORC

A

GARDEN GROVE

D92845A



31808175

Print Date: 12/12/14 15:27 PM

Package 1 of 1

Send Label To Printer

☒ Print All

Edit Shipment

Finish

### LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer

STEP 2 - Fold this page in half.

STEP 3 - Securely attach this label to your package, do not cover the barcode.

STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link

### ADDITIONAL OPTIONS:

Send Label Via Email

Create Return Label

### TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section.

Our liability for loss or damage to any package is limited to your actual damages or \$100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is \$500. For other shipments the highest declared value is \$10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is \$500. Items of "extraordinary value" include, but are not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

Calscience

WORK ORDER #: 14-12-1377

# SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Weiss

DATE: 12/13/14

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 3.2°C - 0.2°C (CF) = 3.0°C ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: )

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter

Checked by: [Signature]

## CUSTODY SEALS INTACT:

☒ Cooler ☐ ☐ No (Not Intact) ☐ Not Present ☐ N/A Checked by: [Signature]

☐ Sample ☐ ☐ No (Not Intact) ☒ Not Present Checked by: [Signature]

## SAMPLE CONDITION:

|   | Yes                                 | No                       | N/A                      |
|---|-------------------------------------|--------------------------|--------------------------|
| Chain-Of-Custody (COC) document(s) received with samples..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| COC document(s) received complete.....                        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.

☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.

|                                      |                                     |                          |                          |
|--------------------------------------|-------------------------------------|--------------------------|--------------------------|
| Sampler's name indicated on COC..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------------------|-------------------------------------|--------------------------|--------------------------|

|  |                                     |                          |                          |
|--|-------------------------------------|--------------------------|--------------------------|
| Sample container label(s) consistent with COC..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|-------------------------------------|--------------------------|--------------------------|

|  |                                     |                          |                          |
|--|-------------------------------------|--------------------------|--------------------------|
| Sample container(s) intact and good condition..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|-------------------------------------|--------------------------|--------------------------|

|   |                                     |                          |                          |
|---|-------------------------------------|--------------------------|--------------------------|
| Proper containers and sufficient volume for analyses requested..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|-------------------------------------|--------------------------|--------------------------|

|  |                                     |                          |                          |
|--|-------------------------------------|--------------------------|--------------------------|
| Analyses received within holding time..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|-------------------------------------|--------------------------|--------------------------|

Aqueous samples received within 15-minute holding time

☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen..... ☐ ☐ ☒

|   |                                     |                          |                          |
|---|-------------------------------------|--------------------------|--------------------------|
| Proper preservation noted on COC or sample container..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|-------------------------------------|--------------------------|--------------------------|

☐ Unpreserved vials received for Volatiles analysis

|   |                          |                          |                                     |
|---|--------------------------|--------------------------|-------------------------------------|
| Volatile analysis container(s) free of headspace..... | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|

|   |                          |                          |                                     |
|---|--------------------------|--------------------------|-------------------------------------|
| Tedlar bag(s) free of condensation..... | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|

## CONTAINER TYPE:

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve ( ) ☐ EnCores® ☐ TerraCores® ☐

Aqueous: ☐ VOA ☐ VOA<sub>h</sub> ☐ VOA<sub>na2</sub> ☐ 125AGB ☐ 125AGB<sub>h</sub> ☐ 125AGB<sub>p</sub> ☒ 1AGB ☐ 1AGB<sub>na2</sub> ☐ 1AGB<sub>s</sub>
☐ 500AGB ☐ 500AGJ ☐ 500AGJ<sub>s</sub> ☐ 250AGB ☐ 250CGB ☐ 250CGB<sub>s</sub> ☐ 1PB ☐ 1PB<sub>na</sub> ☐ 500PB

☐ 250PB ☐ 250PB<sub>n</sub> ☐ 125PB ☐ 125PB<sub>znna</sub> ☐ 100PJ ☐ 100PJ<sub>na2</sub> ☐ ☐ ☐

Air: ☐ Tedlar® ☐ Canister Other: ☐ Trip Blank Lot#: Labeled/Checked by: [Signature]

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: [Signature]

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>: Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure znna: ZnAc<sub>2</sub>+NaOH f: Filtered Scanned by: [Signature]

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-61844-1

Client Project/Site: LRT 2014-2015 Annual Stormwater  
Sampling

For:

Weiss Associates

2200 Powell Street

Suite 925

Emeryville, California 94608

Attn: Mr. Scott Bourne



Authorized for release by:

12/24/2014 12:06:03 PM

Micah Smith, Project Manager II

(925)484-1919

[micah.smith@testamericainc.com](mailto:micah.smith@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Region | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 | 2076 | 2077 | 2078 | 2079 | 2080 | 2081 | 2082 | 2083 | 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 | 2107 | 2108 | 2109 | 2110 | 2111 | 2112 | 2113 | 2114 | 2115 | 2116 | 2117 | 2118 | 2119 | 2120 | 2121 | 2122 | 2123 | 2124 | 2125 | 2126 | 2127 | 2128 | 2129 | 2130 | 2131 | 2132 | 2133 | 2134 | 2135 | 2136 | 2137 | 2138 | 2139 | 2140 | 2141 | 2142 | 2143 | 2144 | 2145 | 2146 | 2147 | 2148 | 2149 | 2150 | 2151 | 2152 | 2153 | 2154 | 2155 | 2156 | 2157 | 2158 | 2159 | 2160 | 2161 | 2162 | 2163 | 2164 | 2165 | 2166 | 2167 | 2168 | 2169 | 2170 | 2171 | 2172 | 2173 | 2174 | 2175 | 2176 | 2177 | 2178 | 2179 | 2180 | 2181 | 2182 | 2183 | 2184 | 2185 | 2186 | 2187 | 2188 | 2189 | 2190 | 2191 | 2192 | 2193 | 2194 | 2195 | 2196 | 2197 | 2198 | 2199 | 2200 | 2201 | 2202 | 2203 | 2204 | 2205 | 2206 | 2207 | 2208 | 2209 | 2210 | 2211 | 2212 | 2213 | 2214 | 2215 | 2216 | 2217 | 2218 | 2219 | 2220 | 2221 | 2222 | 2223 | 2224 | 2225 | 2226 | 2227 | 2228 | 2229 | 2230 | 2231 | 2232 | 2233 | 2234 | 2235 | 2236 | 2237 | 2238 | 2239 | 2240 | 2241 | 2242 | 2243 | 2244 | 2245 | 2246 | 2247 | 2248 | 2249 | 2250 | 2251 | 2252 | 2253 | 2254 | 2255 | 2256 | 2257 | 2258 | 2259 | 2260 | 2261 | 2262 | 2263 | 2264 | 2265 | 2266 | 2267 | 2268 | 2269 | 2270 | 2271 | 2272 | 2273 | 2274 | 2275 | 2276 | 2277 | 2278 | 2279 | 2280 | 2281 | 2282 | 2283 | 2284 | 2285 | 2286 | 2287 | 2288 | 2289 | 2290 | 2291 | 2292 | 2293 | 2294 | 2295 | 2296 | 2297 | 2298 | 2299 | 2300 | 2301 | 2302 | 2303 | 2304 | 2305 | 2306 | 2307 | 2308 | 2309 | 2310 | 2311 | 2312 | 2313 | 2314 | 2315 | 2316 | 2317 | 2318 | 2319 | 2320 | 2321 | 2322 | 2323 | 2324 | 2325 | 2326 | 2327 | 2328 | 2329 | 2330 | 2331 | 2332 | 2333 | 2334 | 2335 | 2336 | 2337 | 2338 | 2339 | 2340 | 2341 | 2342 | 2343 | 2344 | 2345 | 2346 | 2347 | 2348 | 2349 | 2350 | 2351 | 2352 | 2353 | 2354 | 2355 | 2356 | 2357 | 2358 | 2359 | 2360 | 2361 | 2362 | 2363 | 2364 | 2365 | 2366 | 2367 | 2368 | 2369 | 2370 | 2371 | 2372 | 2373 | 2374 | 2375 | 2376 | 2377 | 2378 | 2379 | 2380 | 2381 | 2382 | 2383 | 2384 | 2385 | 2386 | 2387 | 2388 | 2389 | 2390 | 2391 | 2392 | 2393 | 2394 | 2395 | 2396 | 2397 | 2398 | 2399 | 2400 | 2401 | 2402 | 2403 | 2404 | 2405 | 2406 | 2407 | 2408 | 2409 |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|

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1. The purpose of this document is to provide information on the current status of the project.

2. The information is classified as SECRET.

3. The information is to be controlled and handled in accordance with the applicable security policy.

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The figure consists of 15 sub-diagrams arranged in a single row, each showing a grid of points (represented by small squares) and illustrating a step in an algorithm. The steps are numbered 1 through 15. The diagrams show various operations such as selecting points, moving points, and deleting points. For example, in step 1, a point is selected. In step 2, a point is moved. In step 3, a point is deleted. The sequence continues with more complex operations involving multiple points and their interactions.

Figure 1 displays a sequence of 12 diagrams illustrating the evolution of a 2D lattice over time steps  $t=0$  to  $t=11$ . The lattice is composed of black and white squares. At  $t=0$ , there is a single black square at the center. As time progresses, more squares turn black, forming a growing pattern. By  $t=11$ , the pattern has expanded significantly, with black squares forming a complex, branching structure. The diagrams are arranged in two rows of six, with time steps labeled below each diagram.



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Figure 1: Experimental setup. The diagram illustrates the experimental setup for the study. It shows a participant sitting at a table, interacting with a computer screen. The screen displays a 'Stimulus' area with a 'Target' and a 'Response' area. The participant is shown pressing a button on a 'Response' device. The diagram is divided into two main sections: 'Stimulus' and 'Response'. The 'Stimulus' section shows a 'Target' and a 'Response' area. The 'Response' section shows a 'Response' device with a button. The diagram is labeled 'Figure 1' and 'Experimental setup'.

Figure 1: Schematic representation of the experimental design. The diagram shows a timeline of the experiment. It starts with a 'Pretest' phase, followed by a 'Main Experiment' phase. The Main Experiment is divided into two parts: 'Part 1' and 'Part 2'. Part 1 includes a 'Pretest' and a 'Main Experiment' section. Part 2 includes a 'Pretest' and a 'Main Experiment' section. The timeline is marked with 'Time' on the x-axis and 'Task' on the y-axis. The tasks are 'Pretest', 'Main Experiment', and 'Posttest'.

Figure 1: Schematic representation of the experimental design. The diagram shows a sequence of events for two groups: 'Control' and 'Experimental'. The 'Control' group receives a 'Control stimulus' (a red dot) and a 'Control response' (a red dot). The 'Experimental' group receives an 'Experimental stimulus' (a red dot) and an 'Experimental response' (a red dot). The 'Control' group also receives a 'Control stimulus' (a red dot) and a 'Control response' (a red dot). The 'Experimental' group also receives an 'Experimental stimulus' (a red dot) and an 'Experimental response' (a red dot). The diagram is divided into two main sections: 'Control' and 'Experimental'.

Figure 1: Schematic representation of the experimental design. The diagram illustrates the experimental timeline. It begins with a 'Pretest' phase, followed by the 'Main Experiment'. The Main Experiment is split into two parallel paths: 'Control' and 'Intervention'. The Control group watches a 'Control Condition' (10-minute neutral video), while the Intervention group watches an 'Intervention Condition' (10-minute violent video). Both groups then proceed to a 'Posttest' phase. The x-axis represents 'Time', showing the progression from Pretest to Posttest.





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Figure 1 illustrates a multi-layered system architecture. The top layer contains 10 small squares, representing input or initial data. These are connected by arrows to a middle layer of 10 larger squares, which likely represent intermediate processing or hidden layers. The middle layer is then connected by arrows to a bottom layer of 10 even larger squares, labeled 'Output', representing the final results or output of the system.

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| Section 1: General Information |  |  |  |  |                     |  |  |  |  | Section 2: Financial Data |  |  |  |  |      |  |  |  |  | Section 3: Operational Metrics |  |  |  |  |            |  |  |  |  | Section 4: Compliance & Legal |  |  |  |  |          |  |  |  |  | Section 5: Management & HR |  |  |  |  |  |  |  |  |  |
|--------------------------------|--|--|--|--|---------------------|--|--|--|--|---------------------------|--|--|--|--|------|--|--|--|--|--------------------------------|--|--|--|--|------------|--|--|--|--|-------------------------------|--|--|--|--|----------|--|--|--|--|----------------------------|--|--|--|--|--|--|--|--|--|
| Item ID                        |  |  |  |  | Description         |  |  |  |  | Value                     |  |  |  |  | Unit |  |  |  |  | Status                         |  |  |  |  | Date       |  |  |  |  | Location                      |  |  |  |  | Contact  |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 101                            |  |  |  |  | Item 1 Description  |  |  |  |  | 100                       |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-01 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 102                            |  |  |  |  | Item 2 Description  |  |  |  |  | 200                       |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-02 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 103                            |  |  |  |  | Item 3 Description  |  |  |  |  | 300                       |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-03 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 104                            |  |  |  |  | Item 4 Description  |  |  |  |  | 400                       |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-04 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 105                            |  |  |  |  | Item 5 Description  |  |  |  |  | 500                       |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-05 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 106                            |  |  |  |  | Item 6 Description  |  |  |  |  | 600                       |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-06 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 107                            |  |  |  |  | Item 7 Description  |  |  |  |  | 700                       |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-07 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 108                            |  |  |  |  | Item 8 Description  |  |  |  |  | 800                       |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-08 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 109                            |  |  |  |  | Item 9 Description  |  |  |  |  | 900                       |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-09 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 110                            |  |  |  |  | Item 10 Description |  |  |  |  | 1000                      |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-10 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 111                            |  |  |  |  | Item 11 Description |  |  |  |  | 1100                      |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-11 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 112                            |  |  |  |  | Item 12 Description |  |  |  |  | 1200                      |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-12 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 113                            |  |  |  |  | Item 13 Description |  |  |  |  | 1300                      |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-13 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 114                            |  |  |  |  | Item 14 Description |  |  |  |  | 1400                      |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-14 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 115                            |  |  |  |  | Item 15 Description |  |  |  |  | 1500                      |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-15 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 116                            |  |  |  |  | Item 16 Description |  |  |  |  | 1600                      |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-16 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 117                            |  |  |  |  | Item 17 Description |  |  |  |  | 1700                      |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-17 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 118                            |  |  |  |  | Item 18 Description |  |  |  |  | 1800                      |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-18 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 119                            |  |  |  |  | Item 19 Description |  |  |  |  | 1900                      |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-19 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 120                            |  |  |  |  | Item 20 Description |  |  |  |  | 2000                      |  |  |  |  | USD  |  |  |  |  | Active                         |  |  |  |  | 2023-01-20 |  |  |  |  | New York                      |  |  |  |  | John Doe |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |

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| Section 1: General Information |  |  |  |  |                     |  |  |  |  | Section 2: Financial Data |  |  |  |  |          |  |  |  |  | Section 3: Operational Metrics |  |  |  |  |         |  |  |  |  | Section 4: Compliance & Legal |  |  |  |  |          |  |  |  |  | Section 5: Management & HR |  |  |  |  |  |  |  |  |  |
|--------------------------------|--|--|--|--|---------------------|--|--|--|--|---------------------------|--|--|--|--|----------|--|--|--|--|--------------------------------|--|--|--|--|---------|--|--|--|--|-------------------------------|--|--|--|--|----------|--|--|--|--|----------------------------|--|--|--|--|--|--|--|--|--|
| Item ID                        |  |  |  |  | Description         |  |  |  |  | Revenue                   |  |  |  |  | Expenses |  |  |  |  | Production                     |  |  |  |  | Quality |  |  |  |  | Safety                        |  |  |  |  | Training |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 101                            |  |  |  |  | Product A - Q1 2023 |  |  |  |  | 12000                     |  |  |  |  | 8000     |  |  |  |  | 1500                           |  |  |  |  | 95%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 102                            |  |  |  |  | Product B - Q1 2023 |  |  |  |  | 15000                     |  |  |  |  | 9000     |  |  |  |  | 1800                           |  |  |  |  | 90%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 103                            |  |  |  |  | Product C - Q1 2023 |  |  |  |  | 18000                     |  |  |  |  | 10000    |  |  |  |  | 2000                           |  |  |  |  | 85%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 104                            |  |  |  |  | Product D - Q1 2023 |  |  |  |  | 20000                     |  |  |  |  | 11000    |  |  |  |  | 2200                           |  |  |  |  | 80%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 105                            |  |  |  |  | Product E - Q1 2023 |  |  |  |  | 22000                     |  |  |  |  | 12000    |  |  |  |  | 2400                           |  |  |  |  | 75%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 106                            |  |  |  |  | Product F - Q1 2023 |  |  |  |  | 24000                     |  |  |  |  | 13000    |  |  |  |  | 2600                           |  |  |  |  | 70%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 107                            |  |  |  |  | Product G - Q1 2023 |  |  |  |  | 26000                     |  |  |  |  | 14000    |  |  |  |  | 2800                           |  |  |  |  | 65%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 108                            |  |  |  |  | Product H - Q1 2023 |  |  |  |  | 28000                     |  |  |  |  | 15000    |  |  |  |  | 3000                           |  |  |  |  | 60%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 109                            |  |  |  |  | Product I - Q1 2023 |  |  |  |  | 30000                     |  |  |  |  | 16000    |  |  |  |  | 3200                           |  |  |  |  | 55%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 110                            |  |  |  |  | Product J - Q1 2023 |  |  |  |  | 32000                     |  |  |  |  | 17000    |  |  |  |  | 3400                           |  |  |  |  | 50%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 111                            |  |  |  |  | Product K - Q1 2023 |  |  |  |  | 34000                     |  |  |  |  | 18000    |  |  |  |  | 3600                           |  |  |  |  | 45%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 112                            |  |  |  |  | Product L - Q1 2023 |  |  |  |  | 36000                     |  |  |  |  | 19000    |  |  |  |  | 3800                           |  |  |  |  | 40%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 113                            |  |  |  |  | Product M - Q1 2023 |  |  |  |  | 38000                     |  |  |  |  | 20000    |  |  |  |  | 4000                           |  |  |  |  | 35%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 114                            |  |  |  |  | Product N - Q1 2023 |  |  |  |  | 40000                     |  |  |  |  | 21000    |  |  |  |  | 4200                           |  |  |  |  | 30%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 115                            |  |  |  |  | Product O - Q1 2023 |  |  |  |  | 42000                     |  |  |  |  | 22000    |  |  |  |  | 4400                           |  |  |  |  | 25%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 116                            |  |  |  |  | Product P - Q1 2023 |  |  |  |  | 44000                     |  |  |  |  | 23000    |  |  |  |  | 4600                           |  |  |  |  | 20%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 117                            |  |  |  |  | Product Q - Q1 2023 |  |  |  |  | 46000                     |  |  |  |  | 24000    |  |  |  |  | 4800                           |  |  |  |  | 15%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 118                            |  |  |  |  | Product R - Q1 2023 |  |  |  |  | 48000                     |  |  |  |  | 25000    |  |  |  |  | 5000                           |  |  |  |  | 10%     |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 119                            |  |  |  |  | Product S - Q1 2023 |  |  |  |  | 50000                     |  |  |  |  | 26000    |  |  |  |  | 5200                           |  |  |  |  | 5%      |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |
| 120                            |  |  |  |  | Product T - Q1 2023 |  |  |  |  | 52000                     |  |  |  |  | 27000    |  |  |  |  | 5400                           |  |  |  |  | 0%      |  |  |  |  | 0%                            |  |  |  |  | 100%     |  |  |  |  |                            |  |  |  |  |  |  |  |  |  |



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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 104



158180

● = Samples received from a secured, locked area

### Chain of Custody Record

**TestAmerica**  
1220 Quarry Lane  
Pleasanton, CA 94566  
Phone: 925-484-1919 ext.137

Please send analytic results, electronic deliverables and the original chain-of-custody form to  
labresults@weiss.com  
mec@weiss.com  
sab@weiss.com

**INSTRUCTIONS FOR LAB PERSONNEL:**

GeoTracker EDF required? ☐ Yes ☒ No  
Equis 4-file EDWEDD required? ☒ Yes ☐ No  
Specify analytic/prep method and detection limit in report  
Notify us of any anomalous peaks in GC or other scans  
Call immediately with any questions or problems

[illegible]







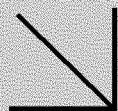








Calscience

**WORK ORDER NUMBER: 14-12-0426***The difference is service*

AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For****Client:** Weiss Associates**Client Project Name:** LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3**Attention:** Scott Bourne  
2200 Powell Street  
Suite 925  
Emeryville, CA 94608-1879

Approved for release on 12/22/2014 by:  
Virendra Patel  
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Client Project Name: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3  
 Work Order Number: 14-12-0426

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## Work Order Narrative

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**Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 12/04/14. They were assigned to Work Order 14-12-0426.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



## Sample Summary

---

|                               |   |
|-------------------------------|---|
| Client: Weiss Associates      | Work Order: 14-12-0426                                    |
| 2200 Powell Street, Suite 925 | Project Name: LRT 2014-2015 Annual Storm Water Sampling / |
| Emeryville, CA 94608-1879     | 426-2026.01 Task 1.1.3                                    |
|                               | PO Number:  |
|                               | Date/Time Received: 12/04/14 10:40                        |
|                               | Number of Containers: 6                                   |

Attn: Scott Bourne

---

| Sample Identification | Lab Number   | Collection Date and Time | Number of Containers | Matrix  |
|-----------------------|--------------|--------------------------|----------------------|---------|
| SW-3-120214           | 14-12-0426-1 | 12/02/14 11:40           | 2                    | Aqueous |
| SW-3-120214-dup       | 14-12-0426-2 | 12/02/14 11:45           | 2                    | Aqueous |
| SW-4/5/6/7-120214     | 14-12-0426-3 | 12/02/14 11:30           | 2                    | Aqueous |

  
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## Detections Summary

Client: Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Work Order: 14-12-0426  
Project Name: LRT 2014-2015 Annual Storm Water Sampling /  
426-2026.01 Task 1.1.3  
Received: 12/04/14

Attn: Scott Bourne

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### Client SampleID

| <u>Analyte</u>                   | <u>Result</u> | <u>Qualifiers</u> | <u>RL</u> | <u>Units</u> | <u>Method</u> | <u>Extraction</u> |
|----------------------------------|---------------|-------------------|-----------|--------------|---------------|-------------------|
| SW-3-120214 (14-12-0426-1)       |               |                   |           |              |               |                   |
| 4,4'-DDD                         | 2.8           |                   | 2.0       | ng/L         | EPA 8081A     | EPA 3510C         |
| 4,4'-DDE                         | 14            |                   | 2.0       | ng/L         | EPA 8081A     | EPA 3510C         |
| 4,4'-DDT                         | 19            |                   | 2.0       | ng/L         | EPA 8081A     | EPA 3510C         |
| SW-3-120214-dup (14-12-0426-2)   |               |                   |           |              |               |                   |
| 4,4'-DDD                         | 2.5           |                   | 1.9       | ng/L         | EPA 8081A     | EPA 3510C         |
| 4,4'-DDE                         | 14            |                   | 1.9       | ng/L         | EPA 8081A     | EPA 3510C         |
| 4,4'-DDT                         | 19            |                   | 1.9       | ng/L         | EPA 8081A     | EPA 3510C         |
| SW-4/5/6/7-120214 (14-12-0426-3) |               |                   |           |              |               |                   |
| 4,4'-DDT                         | 3.5           |                   | 1.9       | ng/L         | EPA 8081A     | EPA 3510C         |

Subcontracted analyses, if any, are not included in this summary.

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\* MDL is shown

## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/04/14  
Work Order: 14-12-0426  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ug/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| SW-3-120214          | 14-12-0426-1-A    | 12/02/14<br>11:40   | Aqueous | GC 51      | 12/08/14      | 12/09/14<br>17:11  | 141208L13   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL    | MDL   | DF   | Qualifiers |
|--------------------|--------|-------|-------|------|------------|
| Alpha-BHC          | ND     | 0.097 | 0.027 | 1.00 |            |
| Beta-BHC           | ND     | 0.097 | 0.029 | 1.00 |            |
| Delta-BHC          | ND     | 0.097 | 0.028 | 1.00 |            |
| Endosulfan I       | ND     | 0.097 | 0.027 | 1.00 |            |
| Endrin Aldehyde    | ND     | 0.097 | 0.026 | 1.00 |            |
| Endosulfan II      | ND     | 0.097 | 0.026 | 1.00 |            |
| Endosulfan Sulfate | ND     | 0.097 | 0.028 | 1.00 |            |
| Methoxychlor       | ND     | 0.097 | 0.024 | 1.00 |            |
| Chlordane          | ND     | 0.97  | 0.32  | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 88       | 50-135         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 92       | 50-135         |            |

| SW-3-120214-dup | 14-12-0426-2-A | 12/02/14<br>11:45 | Aqueous | GC 51 | 12/08/14 | 12/09/14<br>17:25 | 141208L13 |
|-----------------|----------------|-------------------|---------|-------|----------|-------------------|-----------|
|-----------------|----------------|-------------------|---------|-------|----------|-------------------|-----------|

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL    | MDL   | DF   | Qualifiers |
|--------------------|--------|-------|-------|------|------------|
| Alpha-BHC          | ND     | 0.097 | 0.027 | 1.00 |            |
| Beta-BHC           | ND     | 0.097 | 0.029 | 1.00 |            |
| Delta-BHC          | ND     | 0.097 | 0.028 | 1.00 |            |
| Endosulfan I       | ND     | 0.097 | 0.027 | 1.00 |            |
| Endrin Aldehyde    | ND     | 0.097 | 0.026 | 1.00 |            |
| Endosulfan II      | ND     | 0.097 | 0.026 | 1.00 |            |
| Endosulfan Sulfate | ND     | 0.097 | 0.028 | 1.00 |            |
| Methoxychlor       | ND     | 0.097 | 0.024 | 1.00 |            |
| Chlordane          | ND     | 0.97  | 0.32  | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 90       | 50-135         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 94       | 50-135         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/04/14  
Work Order: 14-12-0426  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ug/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 2

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| SW-4/5/6/7-120214    | 14-12-0426-3-A    | 12/02/14<br>11:30   | Aqueous | GC 51      | 12/08/14      | 12/09/14<br>17:40  | 141208L13   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL    | MDL   | DF   | Qualifiers |
|--------------------|--------|-------|-------|------|------------|
| Alpha-BHC          | ND     | 0.096 | 0.027 | 1.00 |            |
| Beta-BHC           | ND     | 0.096 | 0.029 | 1.00 |            |
| Delta-BHC          | ND     | 0.096 | 0.027 | 1.00 |            |
| Endosulfan I       | ND     | 0.096 | 0.027 | 1.00 |            |
| Endrin Aldehyde    | ND     | 0.096 | 0.025 | 1.00 |            |
| Endosulfan II      | ND     | 0.096 | 0.026 | 1.00 |            |
| Endosulfan Sulfate | ND     | 0.096 | 0.028 | 1.00 |            |
| Methoxychlor       | ND     | 0.096 | 0.024 | 1.00 |            |
| Chlordane          | ND     | 0.96  | 0.32  | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 79       | 50-135         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 88       | 50-135         |            |

| Method Blank | 099-12-529-762 | N/A | Aqueous | GC 51 | 12/08/14 | 12/09/14<br>16:01 | 141208L13 |
|--------------|----------------|-----|---------|-------|----------|-------------------|-----------|
|--------------|----------------|-----|---------|-------|----------|-------------------|-----------|

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL   | MDL   | DF   | Qualifiers |
|--------------------|--------|------|-------|------|------------|
| Alpha-BHC          | ND     | 0.10 | 0.028 | 1.00 |            |
| Beta-BHC           | ND     | 0.10 | 0.030 | 1.00 |            |
| Delta-BHC          | ND     | 0.10 | 0.029 | 1.00 |            |
| Endosulfan I       | ND     | 0.10 | 0.028 | 1.00 |            |
| Endrin Aldehyde    | ND     | 0.10 | 0.026 | 1.00 |            |
| Endosulfan II      | ND     | 0.10 | 0.027 | 1.00 |            |
| Endosulfan Sulfate | ND     | 0.10 | 0.029 | 1.00 |            |
| Methoxychlor       | ND     | 0.10 | 0.025 | 1.00 |            |
| Chlordane          | ND     | 1.0  | 0.33  | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 95       | 50-135         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 94       | 50-135         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/04/14  
Work Order: 14-12-0426  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-  
2026.01 Task 1.1.3

Page 1 of 4

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| SW-3-120214          | 14-12-0426-1-B    | 12/02/14<br>11:40   | Aqueous | GC 44      | 12/09/14      | 12/18/14<br>06:50  | 141209L05   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL  | MDL  | DF   | Qualifiers |
|--------------------|--------|-----|------|------|------------|
| Aldrin             | ND     | 2.0 | 0.33 | 1.00 |            |
| 4,4'-DDD           | 2.8    | 2.0 | 0.55 | 1.00 |            |
| 4,4'-DDE           | 14     | 2.0 | 0.48 | 1.00 |            |
| 4,4'-DDT           | 19     | 2.0 | 0.55 | 1.00 |            |
| Alpha Chlordane    | ND     | 2.0 | 0.49 | 1.00 |            |
| Dieldrin           | ND     | 2.0 | 0.55 | 1.00 |            |
| Gamma Chlordane    | ND     | 2.0 | 0.49 | 1.00 |            |
| Toxaphene          | ND     | 25  | 8.2  | 1.00 |            |
| Endrin             | ND     | 2.0 | 0.31 | 1.00 |            |
| Gamma-BHC          | ND     | 2.0 | 0.46 | 1.00 |            |
| Heptachlor         | ND     | 2.0 | 0.36 | 1.00 |            |
| Heptachlor Epoxide | ND     | 2.0 | 0.34 | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 85       | 50-150         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 78       | 50-150         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/04/14  
Work Order: 14-12-0426  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-  
2026.01 Task 1.1.3

Page 2 of 4

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| SW-3-120214-dup      | 14-12-0426-2-B    | 12/02/14<br>11:45   | Aqueous | GC 44      | 12/09/14      | 12/18/14<br>07:04  | 141209L05   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL  | MDL  | DF   | Qualifiers |
|--------------------|--------|-----|------|------|------------|
| Aldrin             | ND     | 1.9 | 0.31 | 1.00 |            |
| 4,4'-DDD           | 2.5    | 1.9 | 0.53 | 1.00 |            |
| 4,4'-DDE           | 14     | 1.9 | 0.46 | 1.00 |            |
| 4,4'-DDT           | 19     | 1.9 | 0.53 | 1.00 |            |
| Alpha Chlordane    | ND     | 1.9 | 0.47 | 1.00 |            |
| Dieldrin           | ND     | 1.9 | 0.53 | 1.00 |            |
| Gamma Chlordane    | ND     | 1.9 | 0.47 | 1.00 |            |
| Toxaphene          | ND     | 24  | 7.9  | 1.00 |            |
| Endrin             | ND     | 1.9 | 0.30 | 1.00 |            |
| Gamma-BHC          | ND     | 1.9 | 0.44 | 1.00 |            |
| Heptachlor         | ND     | 1.9 | 0.35 | 1.00 |            |
| Heptachlor Epoxide | ND     | 1.9 | 0.33 | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 99       | 50-150         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 95       | 50-150         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/04/14  
Work Order: 14-12-0426  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| SW-4/5/6/7-120214    | 14-12-0426-3-B    | 12/02/14<br>11:30   | Aqueous | GC 44      | 12/09/14      | 12/18/14<br>07:18  | 141209L05   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL  | MDL  | DF   | Qualifiers |
|--------------------|--------|-----|------|------|------------|
| Aldrin             | ND     | 1.9 | 0.32 | 1.00 |            |
| 4,4'-DDD           | ND     | 1.9 | 0.53 | 1.00 |            |
| 4,4'-DDE           | ND     | 1.9 | 0.46 | 1.00 |            |
| 4,4'-DDT           | 3.5    | 1.9 | 0.54 | 1.00 |            |
| Alpha Chlordane    | ND     | 1.9 | 0.48 | 1.00 |            |
| Dieldrin           | ND     | 1.9 | 0.53 | 1.00 |            |
| Gamma Chlordane    | ND     | 1.9 | 0.47 | 1.00 |            |
| Toxaphene          | ND     | 24  | 8.0  | 1.00 |            |
| Endrin             | ND     | 1.9 | 0.30 | 1.00 |            |
| Gamma-BHC          | ND     | 1.9 | 0.45 | 1.00 |            |
| Heptachlor         | ND     | 1.9 | 0.35 | 1.00 |            |
| Heptachlor Epoxide | ND     | 1.9 | 0.33 | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 100      | 50-150         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 98       | 50-150         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/04/14  
Work Order: 14-12-0426  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix  | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|---------|------------|---------------|--------------------|-------------|
| Method Blank         | 099-16-036-14     | N/A                 | Aqueous | GC 44      | 12/09/14      | 12/17/14 22:31     | 141209L05   |

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

| Parameter          | Result | RL  | MDL  | DF   | Qualifiers |
|--------------------|--------|-----|------|------|------------|
| Aldrin             | ND     | 2.0 | 0.33 | 1.00 |            |
| 4,4'-DDD           | ND     | 2.0 | 0.55 | 1.00 |            |
| 4,4'-DDE           | ND     | 2.0 | 0.48 | 1.00 |            |
| 4,4'-DDT           | ND     | 2.0 | 0.55 | 1.00 |            |
| Alpha Chlordane    | ND     | 2.0 | 0.49 | 1.00 |            |
| Dieldrin           | ND     | 2.0 | 0.55 | 1.00 |            |
| Gamma Chlordane    | ND     | 2.0 | 0.49 | 1.00 |            |
| Toxaphene          | ND     | 25  | 8.2  | 1.00 |            |
| Endrin             | ND     | 2.0 | 0.31 | 1.00 |            |
| Gamma-BHC          | ND     | 2.0 | 0.46 | 1.00 |            |
| Heptachlor         | ND     | 2.0 | 0.36 | 1.00 |            |
| Heptachlor Epoxide | ND     | 2.0 | 0.34 | 1.00 |            |

| Surrogate                    | Rec. (%) | Control Limits | Qualifiers |
|------------------------------|----------|----------------|------------|
| Decachlorobiphenyl           | 88       | 50-150         |            |
| 2,4,5,6-Tetrachloro-m-Xylene | 89       | 50-150         |            |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - LCS/LCSD

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/04/14  
Work Order: 14-12-0426  
Preparation: EPA 3510C  
Method: EPA 8081A

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

| Quality Control Sample ID | Type | Matrix  | Instrument | Date Prepared | Date Analyzed  | LCS/LCSD Batch Number |
|---------------------------|------|---------|------------|---------------|----------------|-----------------------|
| 099-12-529-762            | LCS  | Aqueous | GC 51      | 12/08/14      | 12/09/14 16:16 | 141208L13             |
| 099-12-529-762            | LCSD | Aqueous | GC 51      | 12/08/14      | 12/09/14 16:42 | 141208L13             |

| Parameter          | Spike Added | LCS Conc. | LCS %Rec. | LCSD Conc. | LCSD %Rec. | %Rec. CL | ME CL  | RPD | RPD CL | Qualifiers |
|--------------------|-------------|-----------|-----------|------------|------------|----------|--------|-----|--------|------------|
| Alpha-BHC          | 0.5000      | 0.4071    | 81        | 0.3930     | 79         | 50-135   | 36-149 | 4   | 0-25   |            |
| Gamma-BHC          | 0.5000      | 0.4210    | 84        | 0.4183     | 84         | 50-135   | 36-149 | 1   | 0-25   |            |
| Beta-BHC           | 0.5000      | 0.3133    | 63        | 0.3111     | 62         | 50-135   | 36-149 | 1   | 0-25   |            |
| Heptachlor         | 0.5000      | 0.4299    | 86        | 0.4335     | 87         | 50-135   | 36-149 | 1   | 0-25   |            |
| Delta-BHC          | 0.5000      | 0.3584    | 72        | 0.3589     | 72         | 50-135   | 36-149 | 0   | 0-25   |            |
| Aldrin             | 0.5000      | 0.4051    | 81        | 0.4080     | 82         | 50-135   | 36-149 | 1   | 0-25   |            |
| Heptachlor Epoxide | 0.5000      | 0.3995    | 80        | 0.4019     | 80         | 50-135   | 36-149 | 1   | 0-25   |            |
| Endosulfan I       | 0.5000      | 0.4163    | 83        | 0.4111     | 82         | 50-135   | 36-149 | 1   | 0-25   |            |
| Dieldrin           | 0.5000      | 0.4232    | 85        | 0.4168     | 83         | 50-135   | 36-149 | 2   | 0-25   |            |
| 4,4'-DDE           | 0.5000      | 0.4104    | 82        | 0.4114     | 82         | 50-135   | 36-149 | 0   | 0-25   |            |
| Endrin             | 0.5000      | 0.4447    | 89        | 0.4512     | 90         | 50-135   | 36-149 | 1   | 0-25   |            |
| Endrin Aldehyde    | 0.5000      | 0.4173    | 83        | 0.4210     | 84         | 50-135   | 36-149 | 1   | 0-25   |            |
| 4,4'-DDD           | 0.5000      | 0.4124    | 82        | 0.4144     | 83         | 50-135   | 36-149 | 0   | 0-25   |            |
| Endosulfan II      | 0.5000      | 0.4110    | 82        | 0.4115     | 82         | 50-135   | 36-149 | 0   | 0-25   |            |
| 4,4'-DDT           | 0.5000      | 0.4232    | 85        | 0.4320     | 86         | 50-135   | 36-149 | 2   | 0-25   |            |
| Endosulfan Sulfate | 0.5000      | 0.4081    | 82        | 0.4170     | 83         | 50-135   | 36-149 | 2   | 0-25   |            |
| Methoxychlor       | 0.5000      | 0.4331    | 87        | 0.4406     | 88         | 50-135   | 36-149 | 2   | 0-25   |            |

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS/LCSD

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608-1879

Date Received: 12/04/14  
Work Order: 14-12-0426  
Preparation: EPA 3510C  
Method: EPA 8081A

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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| Quality Control Sample ID | Type | Matrix  | Instrument | Date Prepared | Date Analyzed  | LCS/LCSD Batch Number |
|---------------------------|------|---------|------------|---------------|----------------|-----------------------|
| 099-16-036-14             | LCS  | Aqueous | GC 44      | 12/09/14      | 12/17/14 22:03 | 141209L05             |
| 099-16-036-14             | LCSD | Aqueous | GC 44      | 12/09/14      | 12/17/14 22:17 | 141209L05             |

| Parameter          | Spike Added | LCS Conc. | LCS %Rec. | LCSD Conc. | LCSD %Rec. | %Rec. CL | ME CL  | RPD | RPD CL | Qualifiers |
|--------------------|-------------|-----------|-----------|------------|------------|----------|--------|-----|--------|------------|
| Aldrin             | 50.00       | 46.36     | 93        | 50.88      | 102        | 50-150   | 33-167 | 9   | 0-25   |            |
| 4,4'-DDD           | 50.00       | 45.69     | 91        | 51.91      | 104        | 50-150   | 33-167 | 13  | 0-25   |            |
| 4,4'-DDE           | 50.00       | 45.52     | 91        | 51.41      | 103        | 50-150   | 33-167 | 12  | 0-25   |            |
| 4,4'-DDT           | 50.00       | 45.18     | 90        | 51.34      | 103        | 50-150   | 33-167 | 13  | 0-25   |            |
| Alpha Chlordane    | 50.00       | 44.22     | 88        | 50.07      | 100        | 50-150   | 33-167 | 12  | 0-25   |            |
| Dieldrin           | 50.00       | 46.77     | 94        | 52.80      | 106        | 50-150   | 33-167 | 12  | 0-25   |            |
| Gamma Chlordane    | 50.00       | 45.25     | 90        | 51.17      | 102        | 50-150   | 33-167 | 12  | 0-25   |            |
| Endrin             | 50.00       | 45.50     | 91        | 52.09      | 104        | 50-150   | 33-167 | 14  | 0-25   |            |
| Gamma-BHC          | 50.00       | 47.51     | 95        | 52.28      | 105        | 50-150   | 33-167 | 10  | 0-25   |            |
| Heptachlor         | 50.00       | 50.34     | 101       | 54.16      | 108        | 50-150   | 33-167 | 7   | 0-25   |            |
| Heptachlor Epoxide | 50.00       | 44.63     | 89        | 50.22      | 100        | 50-150   | 33-167 | 12  | 0-25   |            |

Total number of LCS compounds: 11

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

**Sample Analysis Summary Report**

Work Order: 14-12-0426

Page 1 of 1

| <u>Method</u> | <u>Extraction</u> | <u>Chemist ID</u> | <u>Instrument</u> | <u>Analytical Location</u> |
|---------------|-------------------|-------------------|-------------------|----------------------------|
| EPA 8081A     | EPA 3510C         | 421               | GC 44             | 1                          |
| EPA 8081A     | EPA 3510C         | 669               | GC 51             | 1                          |



## Glossary of Terms and Qualifiers

Work Order: 14-12-0426

Page 1 of 1

| <u>Qualifiers</u> | <u>Definition</u>  |
|-------------------|--|
| *                 | See applicable analysis comment.   |
| <                 | Less than the indicated value.   |
| >                 | Greater than the indicated value.  |
| 1                 | Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.   |
| 2                 | Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification. |
| 3                 | Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.  |
| 4                 | The MS/MSD RPD was out of control due to suspected matrix interference.  |
| 5                 | The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.  |
| 6                 | Surrogate recovery below the acceptance limit.   |
| 7                 | Surrogate recovery above the acceptance limit.   |
| B                 | Analyte was present in the associated method blank.  |
| BU                | Sample analyzed after holding time expired.  |
| BV                | Sample received after holding time expired.  |
| E                 | Concentration exceeds the calibration range.   |
| ET                | Sample was extracted past end of recommended max. holding time.  |
| HD                | The chromatographic pattern was inconsistent with the profile of the reference fuel standard.  |
| HDH               | The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).   |
| HDL               | The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).   |
| J                 | Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.  |
| JA                | Analyte positively identified but quantitation is an estimate.   |
| ME                | LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).   |
| ND                | Parameter not detected at the indicated reporting limit.   |
| Q                 | Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.  |
| SG                | The sample extract was subjected to Silica Gel treatment prior to analysis.  |
| X                 | % Recovery and/or RPD out-of-range.  |
| Z                 | Analyte presence was not confirmed by second column or GC/MS analysis.   |

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

# Chain of Custody Record

CalSciene Environmental Lab  
5063 Commercial Circle, Suite II  
Concord, CA 94520  
Phone: 925-689-9022

Please send analytic results, electronic deliverables and the original chain-of-custody form to:  
labresults@weiss.com  
mec@weiss.com  
sab@weiss.com

## INSTRUCTIONS FOR LAB PERSONNEL:

GeoTracker EDF required? ☐ Yes ☒ No  
Equis 4-file EDWEDD required? ☒ Yes ☐ No  
Specify analytic/prep method and detection limit in report.  
Notify us of any anomalous peaks in GC or other scans.  
Call immediately with any questions or problems.

14-12-0426

|  |                       |                                    |             |  |            |                              |  |              |  |                         |  |  |  |                   |  |                        |
|--|-----------------------|------------------------------------|-------------|--|------------|------------------------------|--|--------------|--|-------------------------|--|--|--|-------------------|--|------------------------|
| Client Contact   |                       | Project Manager: Scott Bourne      |             | Protocol ID/path: J:\Levin Richmond\03b_Sampling   |            |                              |  |              |  |                         |  |  |  | COC Number:       |  |                        |
| Weiss Associates   |                       | Project ID: 426-2026.01 Task 1.1.3 |             | <div style="display: flex;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Analyze (Method ID)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Pesticides (EPA 8081A)</div> </div> |            |                              |  |              |  |                         |  |  |  | Page ____ of ____ |  |                        |
| 2200 Powell Street, Suite 925  |                       | Sampled by: M Cunningham           |             |  |            |                              |  |              |  |                         |  |  |  | SDG number:       |  |                        |
| Emeryville, CA 94608   |                       | Sample date(s): 12/2/14            |             |  |            |                              |  |              |  |                         |  |  |  |                   |  |                        |
| (510) 450-6000 Phone   |                       | Analysis Turnaround Time:          |             |  |            |                              |  |              |  |                         |  |  |  |                   |  |                        |
| (510) 547-5043 FAX   |                       | Standard                           |             |  |            |                              |  |              |  |                         |  |  |  |                   |  |                        |
| Job Name: LRT 2014-2015 Annual Storm Water Sampling  |                       | (Specify Days or Hours)            |             |  |            |                              |  |              |  |                         |  |  |  |                   |  |                        |
| Address: Levin Richmond Terminal,<br>402 Wright Avenue, Richmond, CA 94804   |                       |                                    |             |  |            |                              |  |              |  |                         |  |  |  |                   |  |                        |
| Lab ID   | Sample Identification | Sample Date                        | Sample Time | Sample Matrix  | # of Cont. |                              |  |              |  |                         |  |  |  |                   |  | Sample Specific Notes: |
| 1  | SW-3-120214           | 12/2/14                            | 1140        | W  | 2          | ✓                            |  |              |  |                         |  |  |  |                   |  |                        |
| 2  | SW-3-120214-dep       | ↓                                  | 1145        | ↓  | 2          | ✓                            |  |              |  |                         |  |  |  |                   |  |                        |
| 3  | SW-4/5/6/7-120214     | ↓                                  | 1130        | ↓  | 2          | ✓                            |  |              |  |                         |  |  |  |                   |  |                        |
| Field Filtered (X):  |                       |                                    |             |  |            |                              |  |              |  |                         |  |  |  |                   |  |                        |
| Preservation Used: 1= Ice, 2= HCl; 3= H <sub>2</sub> SO <sub>4</sub> ; 4=HNO <sub>3</sub> ; 5=NaOH; 6= Other   |                       |                                    |             |  |            | 1                            |  |              |  |                         |  |  |  |                   |  |                        |
| Special Instructions/OC Requirements & Comments: Level II Report. Report with reporting limit and method detection limit. Please use agreed upon analytical methods for lowest detection limits. |                       |                                    |             |  |            |                              |  |              |  |                         |  |  |  |                   |  |                        |
| Relinquished by: M Cunningham  |                       | Company: Weiss                     |             | Date/Time: 12/3/14 1235  |            | Received by: To O'Malley ECI |  | Company: ECI |  | Date/Time: 12/3/14 1235 |  |  |  |                   |  |                        |
| Relinquished by: To O'Malley TO GSD  |                       | Company: ECI                       |             | Date/Time: 12/3/14 1730  |            | Received by:                 |  | Company:     |  | Date/Time:              |  |  |  |                   |  |                        |
| Relinquished by:   |                       | Company:                           |             | Date/Time:   |            | Received by:                 |  | Company: ECI |  | Date/Time: 12/4/14 1040 |  |  |  |                   |  |                        |

☒ = Samples released to a secured, locked area.

● = Samples received from a secured, locked area



< WebShip > > > > >

800-322-5555 www.gso.com

0426

Ship From:  
ALAN KEMP  
CAL SCIENCE- CONCORD  
5063 COMMERCIAL CIRCLE #H  
CONCORD, CA 94520

Ship To:  
SAMPLE RECEIVING  
CEL  
7440 LINCOLN WAY  
GARDEN GROVE, CA 92841

COD:  
\$0.00

Reference:  
WEISS, PAC ECORISK,

Delivery Instructions:

Signature Type:  
SIGNATURE REQUIRED

Tracking #: 526296005

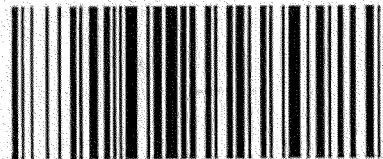


NPS

ORC  
GARDEN GROVE

A

D92845A



31443783

Print Date: 12/03/14 16:18 PM

Package 1 of 1

Send Label To Printer

☒ Print All

Edit Shipment

Finish

### LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

STEP 1 - Use the "Send Label To Printer" button on this page to print the shipping label on a laser or inkjet printer.

STEP 2 - Fold this page in half.

STEP 3 - Securely attach this label to your package, do not cover the barcode.

STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

### ADDITIONAL OPTIONS:

Send Label Via Email

Create Return Label

### TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our liability for loss or damage to any package is limited to your actual damages or \$100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is \$500. For other shipments the highest declared value is \$10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is \$500. Items of "extraordinary value" include, but not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

Calscience

WORK ORDER #: 14-12-0426

# SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Weiss

DATE: 12/04/14

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 2.1 °C - 0.2°C (CF) = 1.9 °C ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter

Checked by: 15

## CUSTODY SEALS INTACT:

☒ Cooler ☐ \_\_\_\_\_ ☐ No (Not Intact) ☐ Not Present ☐ N/A Checked by: 15

☐ Sample ☐ \_\_\_\_\_ ☐ No (Not Intact) ☒ Not Present Checked by: 592

## SAMPLE CONDITION:

|   | Yes                                 | No                       | N/A                      |
|---|-------------------------------------|--------------------------|--------------------------|
| Chain-Of-Custody (COC) document(s) received with samples..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| COC document(s) received complete.....                        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.

☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.

|                                      |                                     |                          |                          |
|--------------------------------------|-------------------------------------|--------------------------|--------------------------|
| Sampler's name indicated on COC..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------------------|-------------------------------------|--------------------------|--------------------------|

|  |                                     |                          |                          |
|--|-------------------------------------|--------------------------|--------------------------|
| Sample container label(s) consistent with COC..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|-------------------------------------|--------------------------|--------------------------|

|  |                                     |                          |                          |
|--|-------------------------------------|--------------------------|--------------------------|
| Sample container(s) intact and good condition..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|-------------------------------------|--------------------------|--------------------------|

|   |                                     |                          |                          |
|---|-------------------------------------|--------------------------|--------------------------|
| Proper containers and sufficient volume for analyses requested..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|-------------------------------------|--------------------------|--------------------------|

|  |                                     |                          |                          |
|--|-------------------------------------|--------------------------|--------------------------|
| Analyses received within holding time..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|-------------------------------------|--------------------------|--------------------------|

Aqueous samples received within 15-minute holding time

☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen..... ☐ ☐ ☒

|   |                                     |                          |                          |
|---|-------------------------------------|--------------------------|--------------------------|
| Proper preservation noted on COC or sample container..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|-------------------------------------|--------------------------|--------------------------|

☐ Unpreserved vials received for Volatiles analysis

|   |                          |                          |                                     |
|---|--------------------------|--------------------------|-------------------------------------|
| Volatile analysis container(s) free of headspace..... | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|

|   |                          |                          |                                     |
|---|--------------------------|--------------------------|-------------------------------------|
| Tedlar bag(s) free of condensation..... | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|

## CONTAINER TYPE:

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (\_\_\_\_\_) ☐ EnCores® ☐ TerraCores® ☐ \_\_\_\_\_

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna<sub>2</sub> ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☒ 1AGB ☐ 1AGBna<sub>2</sub> ☐ 1AGBs

☐ 500AGB ☐ 500AGJ ☐ 500AGJs ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 1PB ☐ 1PBna ☐ 500PB

☐ 250PB ☐ 250PBn ☐ 125PB ☐ 125PBznna ☐ 100PJ ☐ 100PJna<sub>2</sub> ☐ \_\_\_\_\_ ☐ \_\_\_\_\_ ☐ \_\_\_\_\_

Air: ☐ Tedlar® ☐ Canister Other: ☐ \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: 592

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 592

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>: Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure znna: ZnAc<sub>2</sub>+NaOH f: Filtered Scanned by: 592

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-62889-1

Client Project/Site: LRT 2014-2015 Annual Stormwater  
Sampling

For:

Weiss Associates

2200 Powell Street

Suite 925

Emeryville, California 94608

Attn: Mr. Scott Bourne



Authorized for release by:

2/24/2015 3:33:47 PM

Micah Smith, Project Manager II

(925)484-1919

[micah.smith@testamericainc.com](mailto:micah.smith@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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1. The purpose of this document is to provide a clear and concise summary of the project's progress and to identify any issues that need to be addressed.

2. Project Overview

The project is currently in the planning phase and is expected to be completed by the end of the year.

3. Objectives

The project aims to achieve the following objectives:

- 1. To develop a comprehensive business plan.
- 2. To secure funding for the project.
- 3. To launch the project by the end of the year.

The project is currently in the planning phase and is expected to be completed by the end of the year.

4. Progress

The project has made significant progress in the planning phase. A comprehensive business plan has been developed and funding has been secured. The project is expected to be launched by the end of the year.

5. Issues

The project is currently in the planning phase and is expected to be completed by the end of the year.

6. Conclusion

The project has made significant progress in the planning phase. A comprehensive business plan has been developed and funding has been secured. The project is expected to be launched by the end of the year.

7. Appendix

The project has made significant progress in the planning phase. A comprehensive business plan has been developed and funding has been secured. The project is expected to be launched by the end of the year.

The project has made significant progress in the planning phase. A comprehensive business plan has been developed and funding has been secured. The project is expected to be launched by the end of the year.

























Figure 1 shows a sequence of 12 diagrams representing the evolution of a 2D lattice over time steps  $t=0$  to  $t=11$ . The lattice is a 10x10 grid of squares. At  $t=0$ , there is a single black square at the center (5,5). As time progresses, the black squares spread outwards, forming a diamond-like shape. By  $t=11$ , the black squares form a large, complex pattern that fills most of the 10x10 grid, with some white squares remaining in the corners and along the edges.

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- 13
- 14

720-62889

Please send analytic results, electronic deliverables and the original chain-of-custody form to:  
labresults@weiss.com  
mec@weiss.com  
sab@weiss.com

GeoTracker EDF required? ☐ Yes ☒ No  
Equis 4-file EDWEDD required? ☒ Yes ☐ No  
Specify analytic/prep method and detection limit in report.  
Notify us of any anomalous peaks in GC or other scans.  
Call immediately with any questions or problems.

159238

☒ = Samples released to a secured, locked area

● = Samples received from a secured, locked area

2.8°C  
7 98 2/8/15

单位: 人民币元

编制单位: 上海浦东发展银行股份有限公司

2014 年 12 月 31 日

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[illegible]

Three rows of empty boxes for writing answers:

- Row 1: 10 boxes
- Row 2: 10 boxes
- Row 3: 10 boxes

The figure illustrates the experimental design with two rows of stimuli. The top row consists of five boxes, each containing a unique pattern of vertical lines. The bottom row consists of five boxes, each containing a unique pattern of horizontal lines. Arrows at the bottom of each column indicate the sequence of stimuli from left to right.

[illegible]





ELAP#2647

Client:

**Scott Bourne**

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA94608  
Phone:(510) 450-6000  
Fax: (510) 547-5043  
[labresults@weiss.com](mailto:labresults@weiss.com)  
[mec@weiss.com](mailto:mec@weiss.com)  
[sab@weiss.com](mailto:sab@weiss.com)

Work Order: 4435

Project name:LRT 2014-2015 Annual  
Storm Water Sampling

**Lab ID#:4435**

Sampling date:2/06/15

Sample received date:2/11/15 @ 9:35

Analysis Date: 2/11/15

Reporting Date: 2/18/15

Matrix: Water

Page 1 of 4

---

### Case Narrative

---

*This report presents the results of the analysis of the Water sample received on 2/11/2015 and assigned the listed Cel Analytical work order number 4435 (CeIA 4435).*

*Analysis were conducted according to StormKlear HaloSource HS-SOP-5054-02 methods validated in-house. All QA/QC requirements were met and no anomalies associated with the analysis of these sample(s) were observed.*

---

Reviewed by:

A handwritten signature in cursive script, appearing to read 'Yeggie Z. Dearborn'.

**Yeggie Dearborn, Ph.D.**  
**Laboratory Director**



cel analytical, inc.

**Scott Bourne**

Weiss Associates  
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Emeryville, CA94608  
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Fax: (510) 547-5043  
[labresults@weiss.com](mailto:labresults@weiss.com)  
[mec@weiss.com](mailto:mec@weiss.com)  
[sab@weiss.com](mailto:sab@weiss.com)

Project name:LRT 2014-2015 Annual  
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**Lab ID#:4435**

Sampling date:2/06/15

Sample received date:2/11/15 @ 9:35

Analysis Date: 2/11/15

Reporting Date: 2/18/15

Matrix: Water

Page 2 of 4

**Laboratory Report**

Qualitative/Colorimetric Analysis

**Residual Chitosan**

|         |                                   | Results                     |
|---------|-----------------------------------|-----------------------------|
| Lab ID  | Sample ID-Description/Date & Time | Residual Chitosan<br>(mg/L) |
| 4435-01 | TS1-E-020615 2/6/15 13:50         | Non-Detected                |

| Parameter         | Laboratory Reporting Limit | Method         |
|-------------------|----------------------------|----------------|
| Residual Chitosan | 0.1mg/L                    | HS-SOP-5054-02 |

Reveiwed by: Yeggie Dearborn Ph.D.

Lab Director



cel analytical, inc.

**Scott Bourne**

Weiss Associates  
2200 Powell Street, Suite 925  
Emeryville, CA 94608  
Phone: (510) 450-6000  
Fax: (510) 547-5043  
[labresults@weiss.com](mailto:labresults@weiss.com)  
[mec@weiss.com](mailto:mec@weiss.com)  
[sab@weiss.com](mailto:sab@weiss.com)

Project name: LRT 2014-2015 Annual  
Storm Water Sampling

**Lab ID#: 4435**

Sampling date: 2/06/15

Sample received date: 2/11/15 @ 9:35

Analysis Date: 2/11/15

Reporting Date: 2/18/15

Matrix: Water

Page 3 of 4

**Quality Control Report**

**Residual Chitosan**

Method: HS-SOP-5054-02

Reporting Limit: 0.1 mg/L

Quality control analysis

| Matrix           | Sample Results ppm       |
|------------------|--------------------------|
| Control Sample * | Detected $\geq 0.1$ mg/L |
| Blank            | Non-Detected             |

\*Neat Product used as coagulant and diluted to achieve 0.1 mg/L

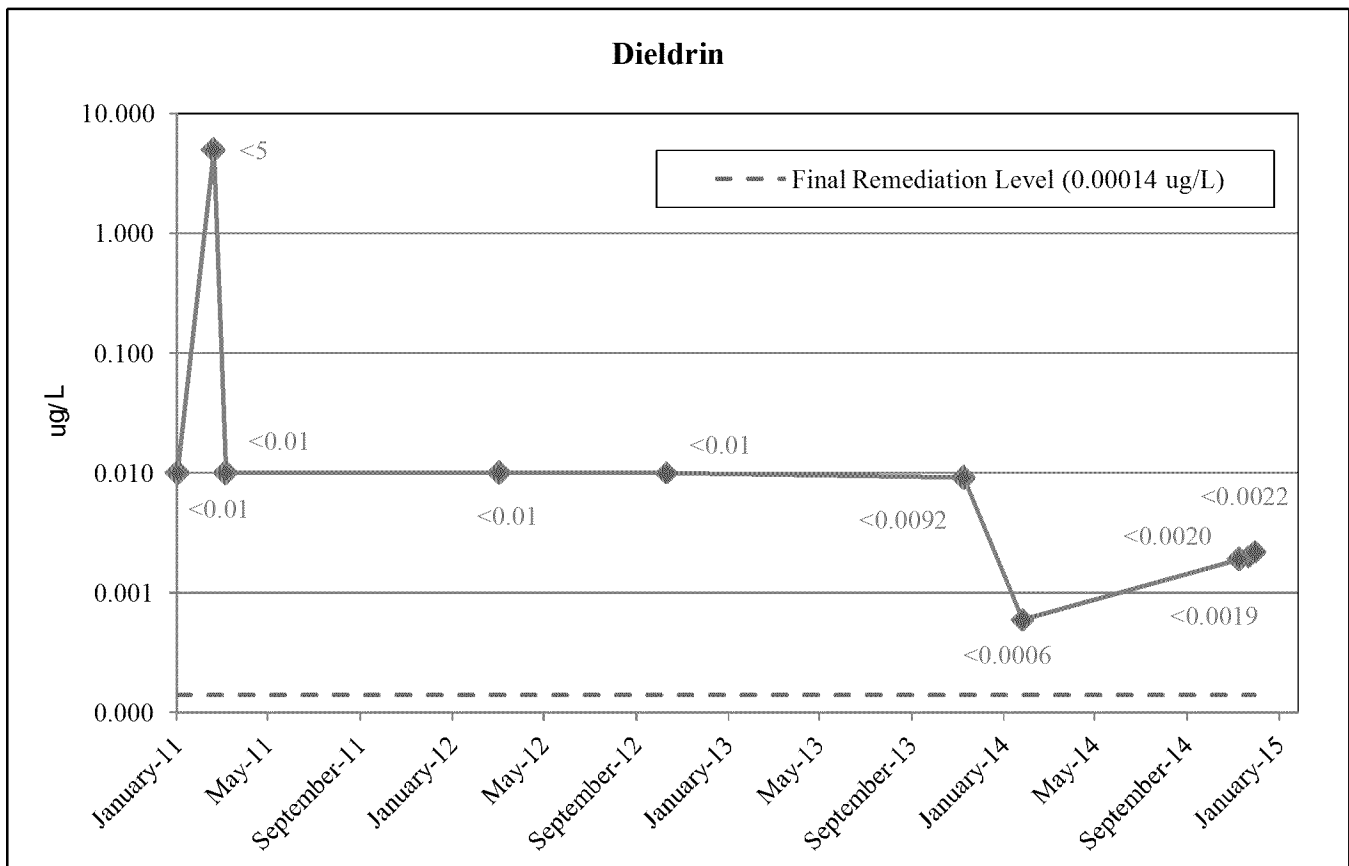
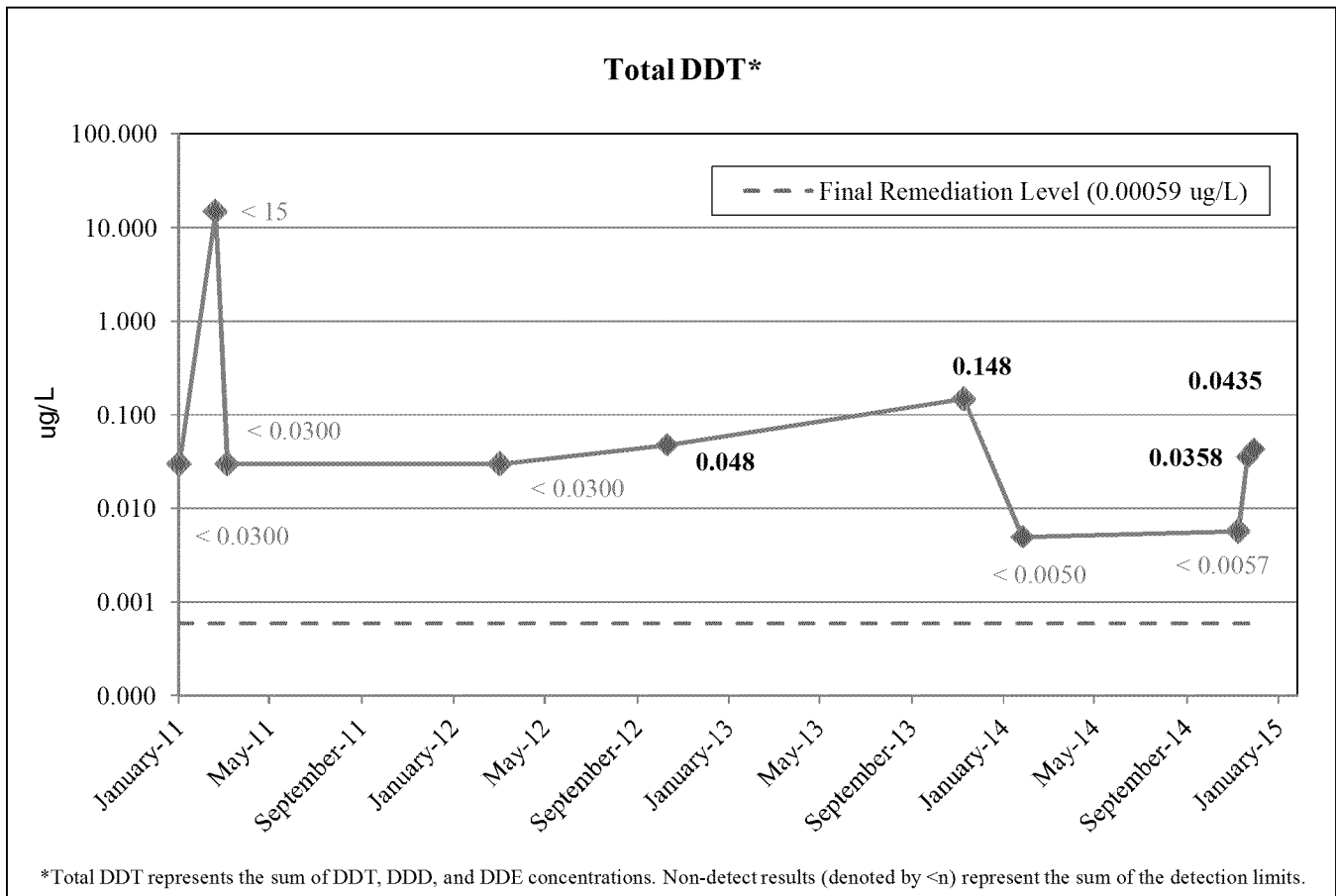
Reviewed By: Yeggie Dearborn, Ph.D.  
Laboratory Director



## **APPENDIX C**

### **STORM WATER PESTICIDE CONCENTRATION TREND CHARTS FOR DDT AND DIELDRIN**

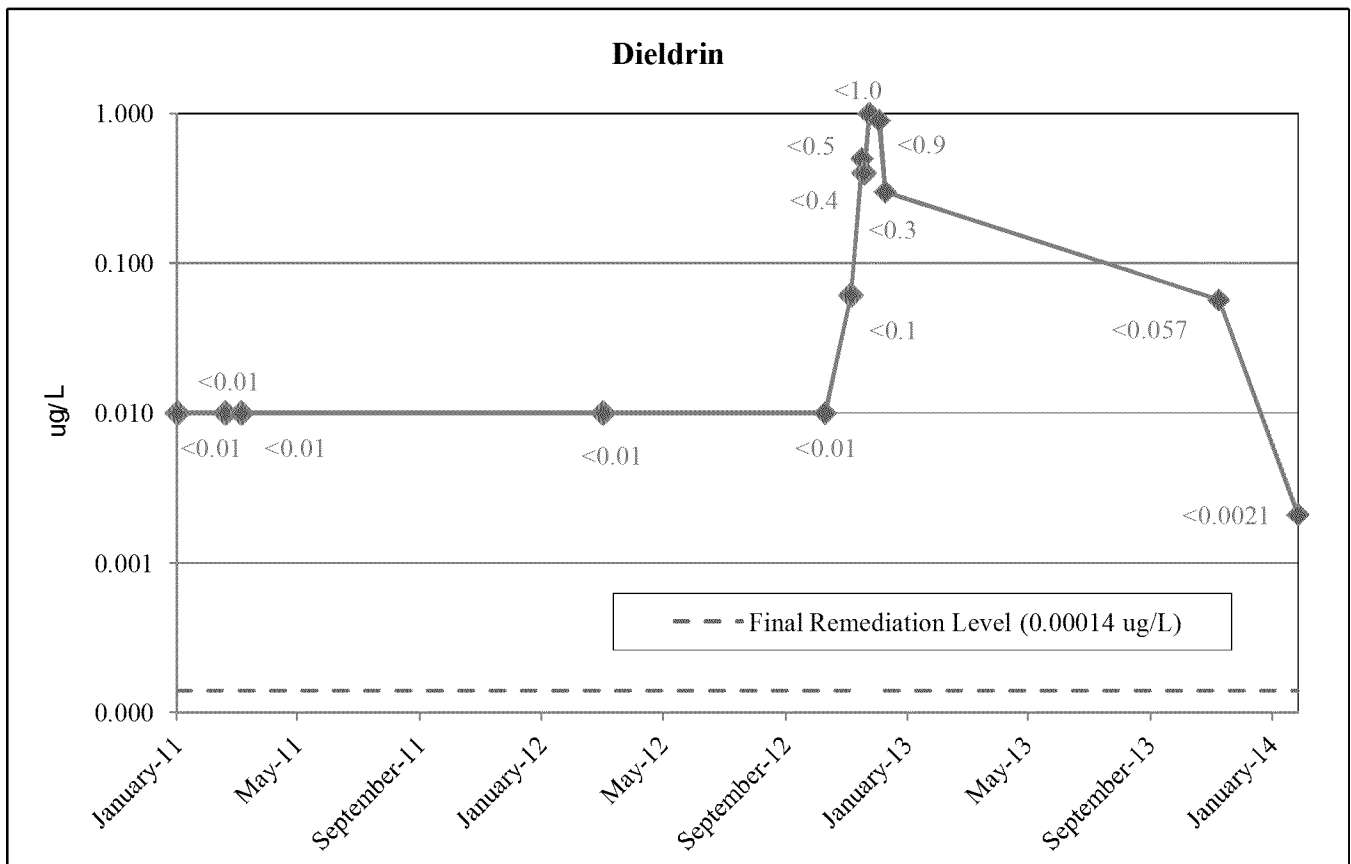
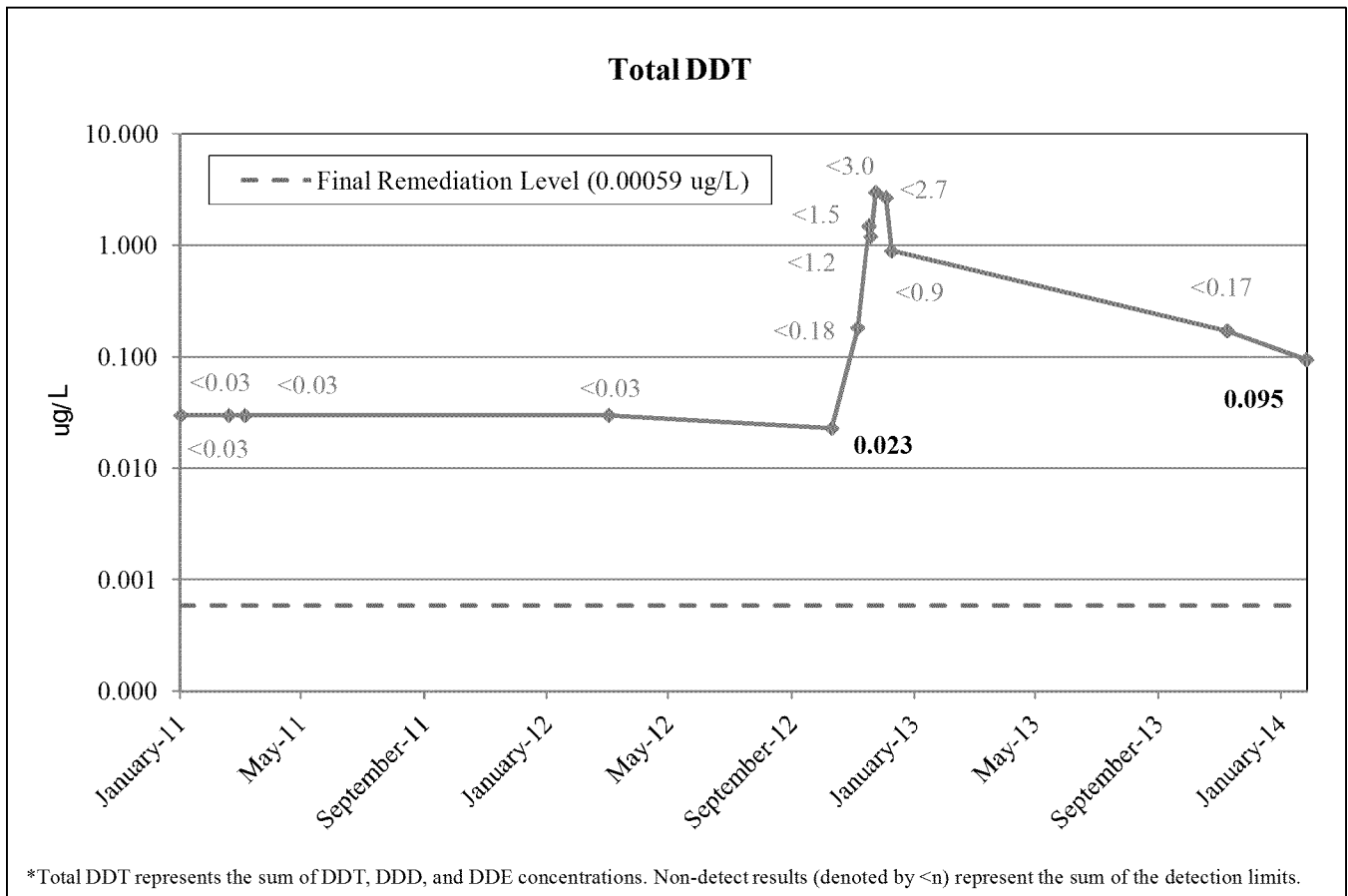
## SW-3 Pesticide Concentration Trend Charts 2011-2015



Note:  
Data prior to February 2013 represents samples collected by previous consultants.

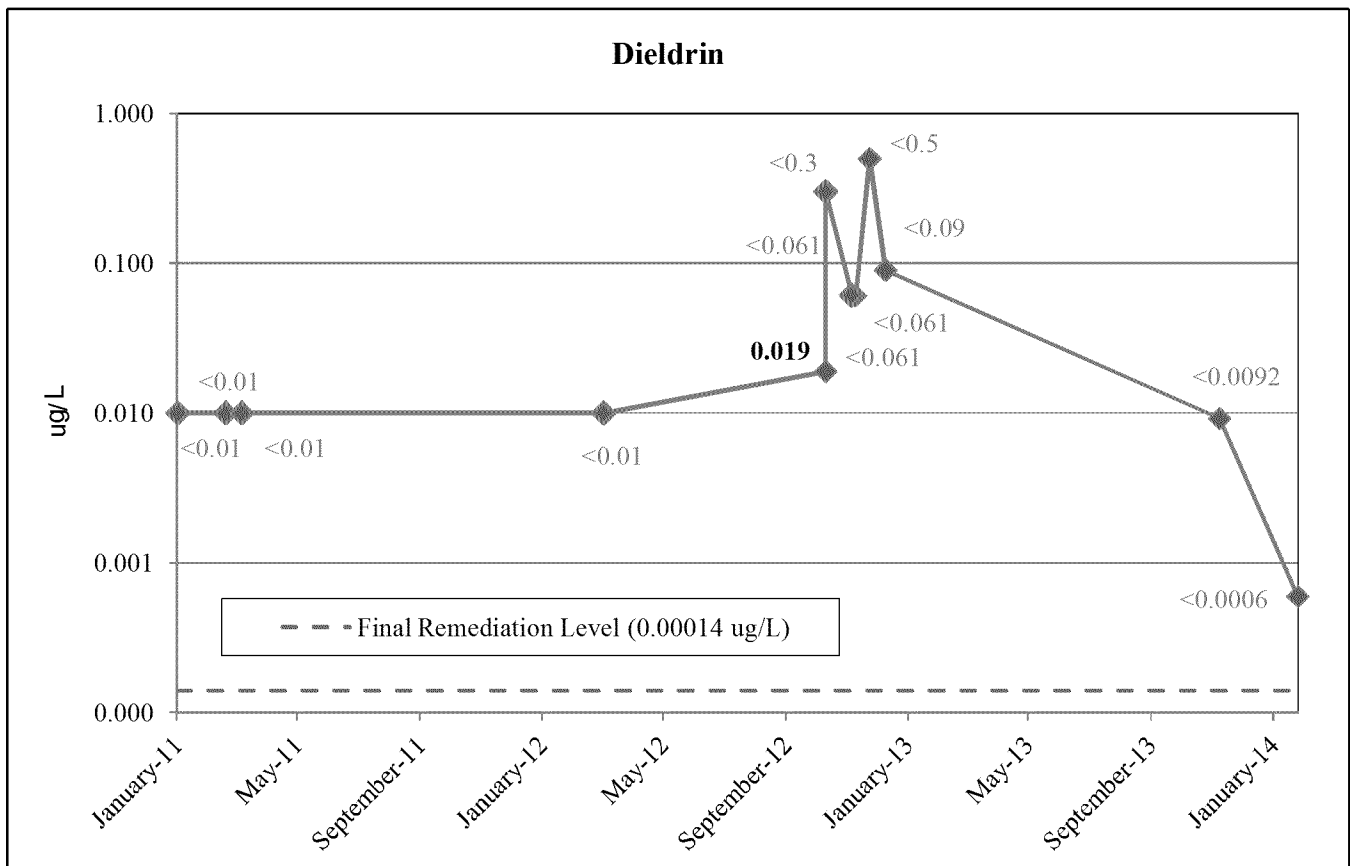
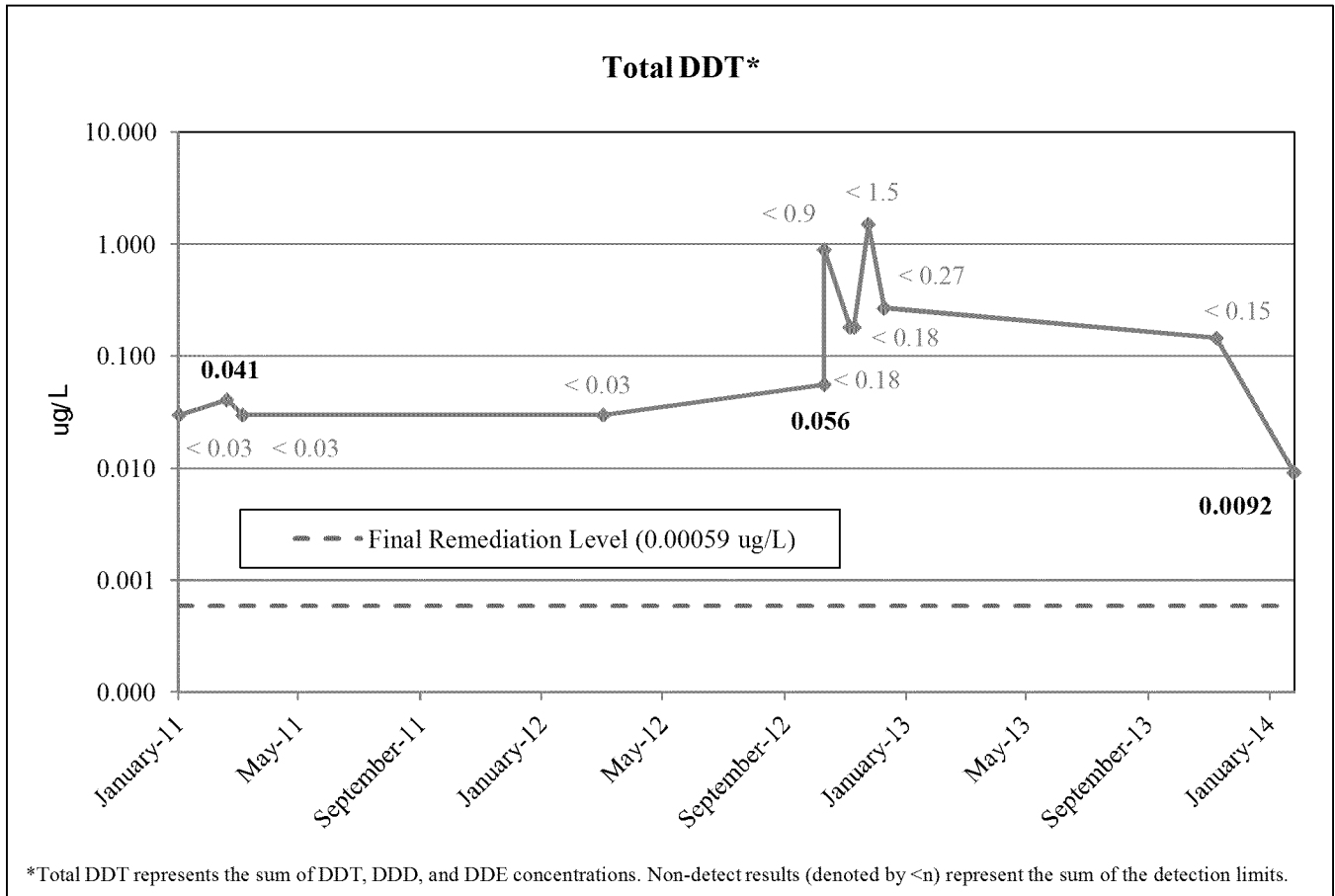


## SW-4 Pesticide Concentration Trend Charts 2011-2014



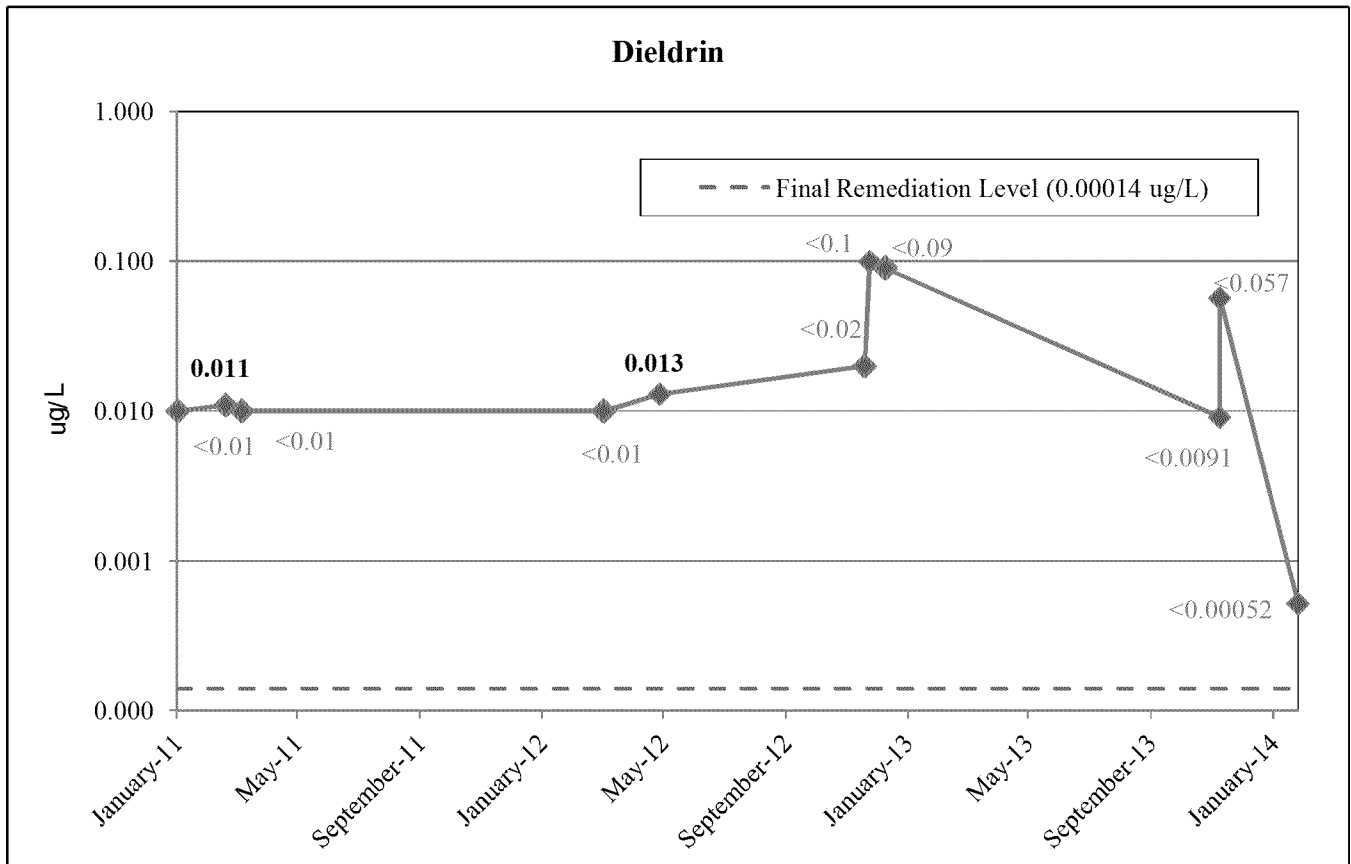
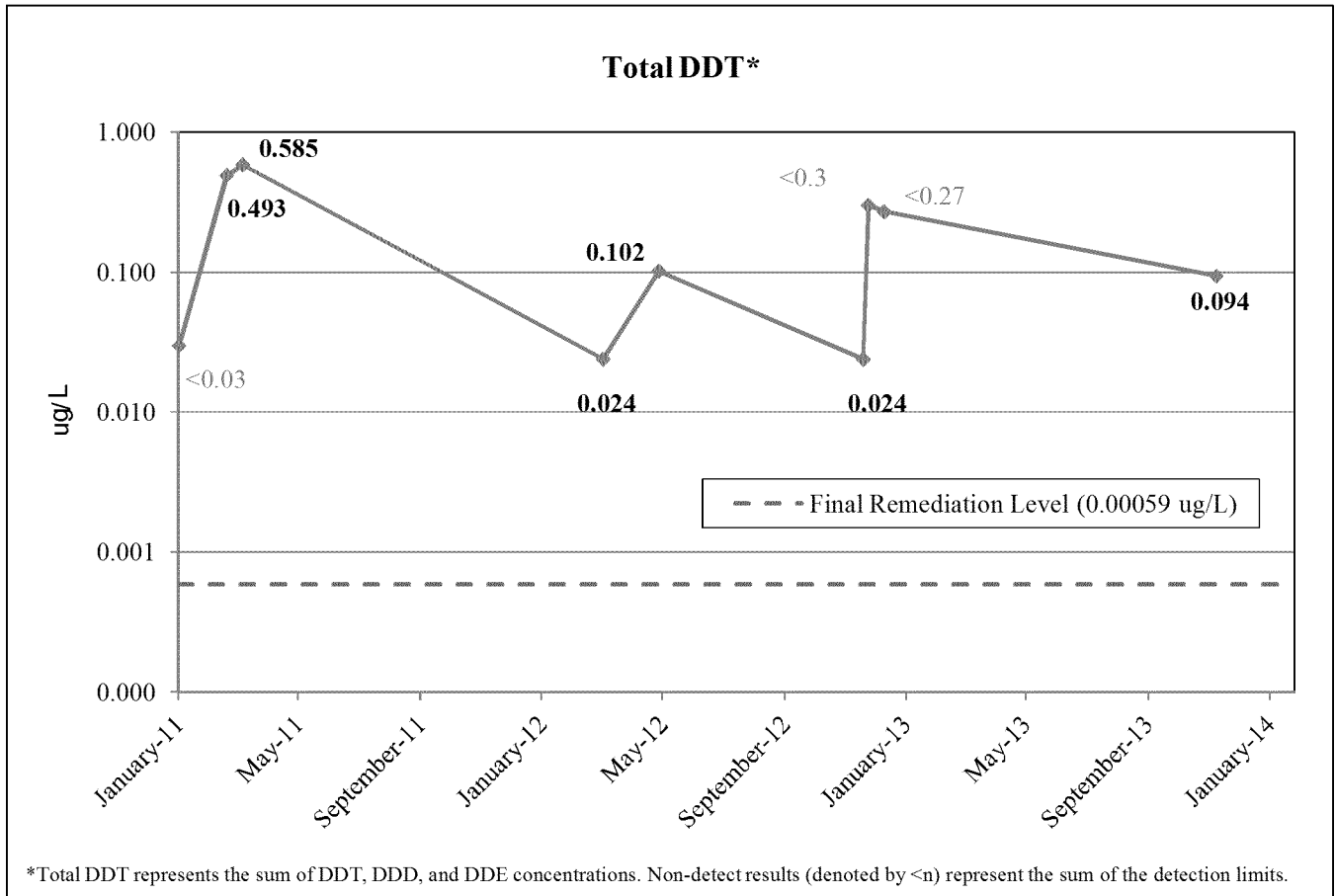
Note:  
Data prior to February 2013 represents samples collected by previous consultants.

## SW-5 Pesticide Concentration Trend Charts 2011-2014



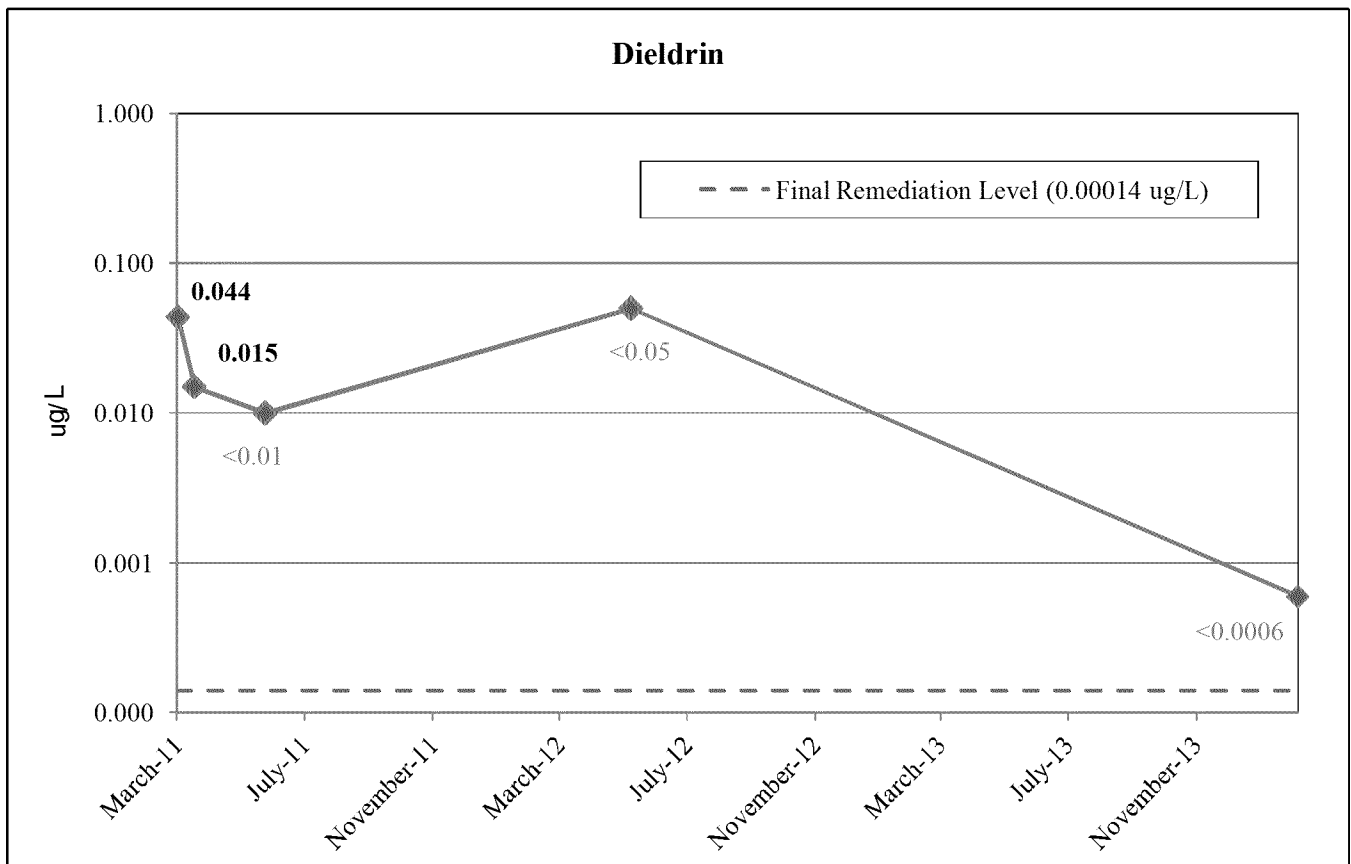
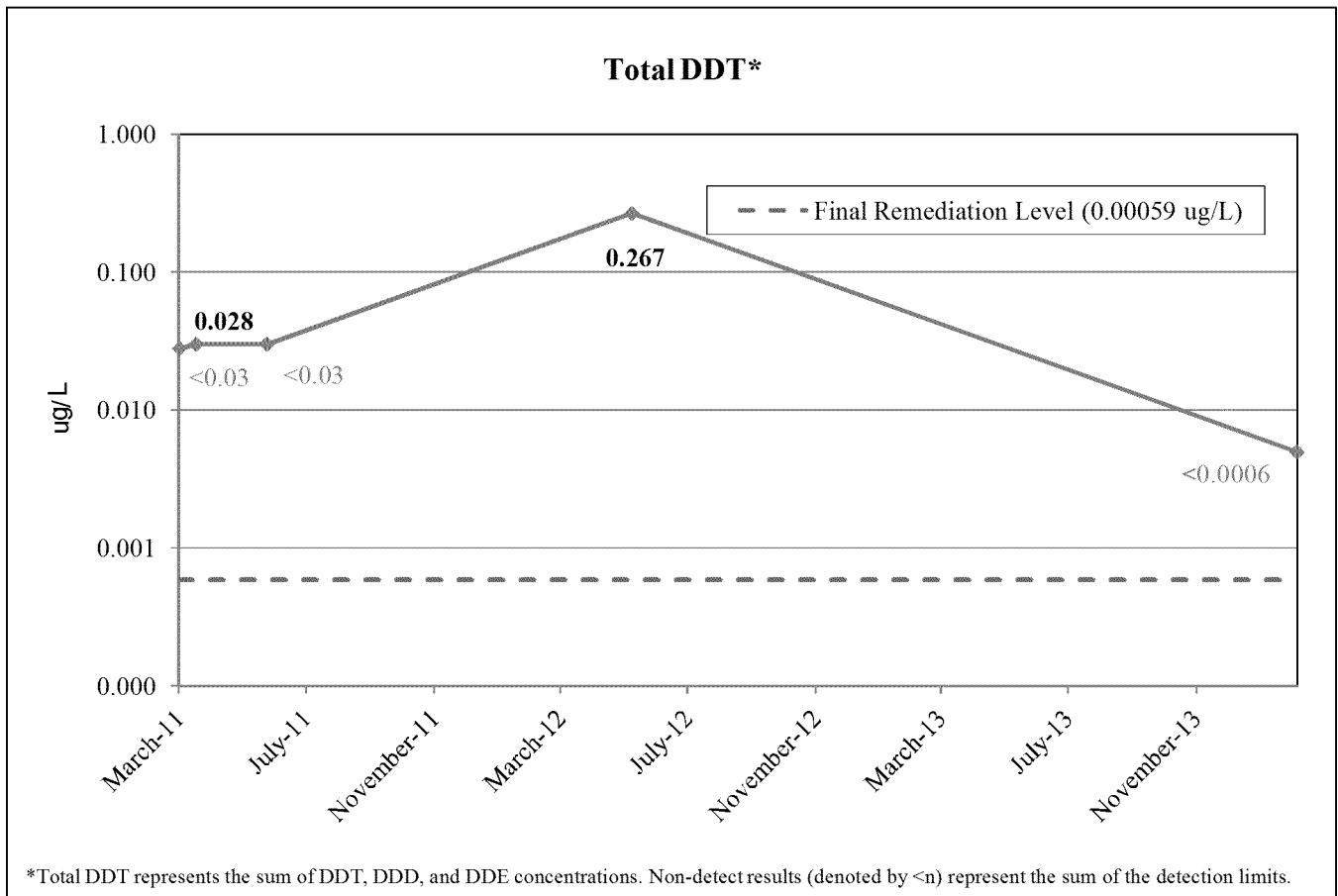
Note:  
Data prior to February 2013 represents samples collected by previous consultants.

## SW-6 Pesticide Concentration Trend Charts 2011-2014



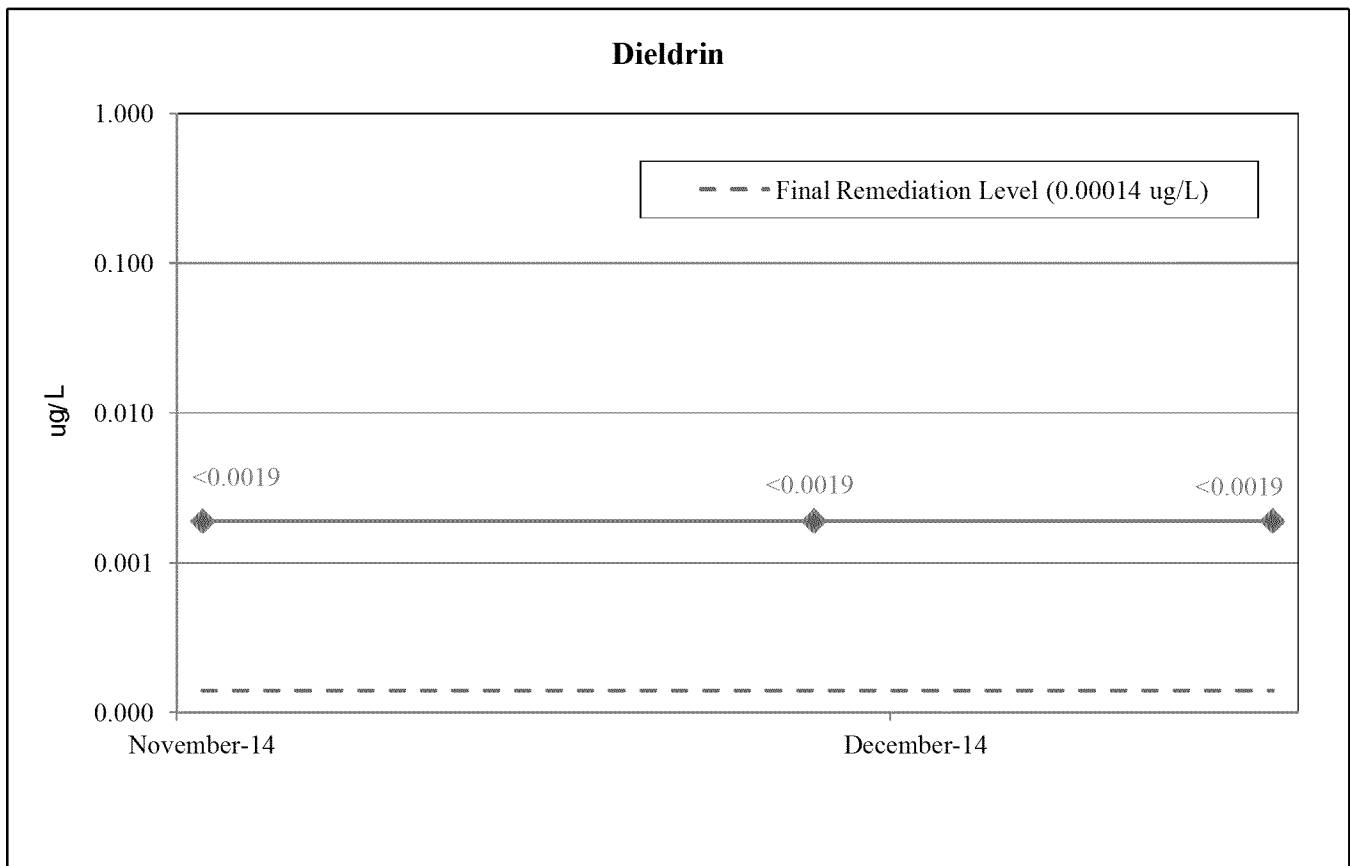
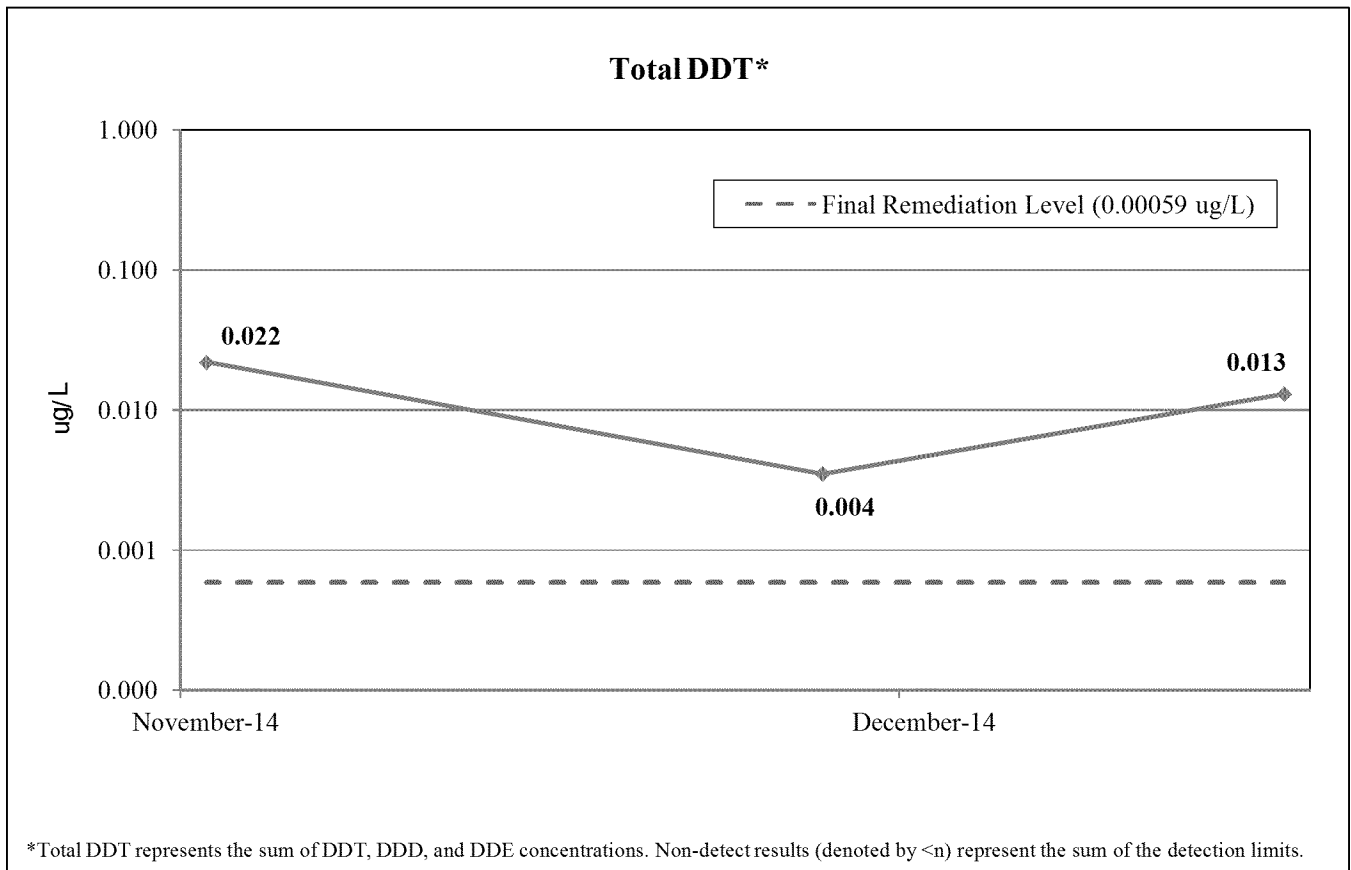
Note:  
Data prior to February 2013 represents samples collected by previous consultants.

## SW-7 Pesticide Concentration Trend Charts 2011-2014



Note:  
Data prior to February 2013 represents samples collected by previous consultants.

## SW-4 through SW-7 Pesticide Concentration Trend Charts 2014-2015



Note:  
Data prior to February 2013 represents samples collected by previous consultants.

## **APPENDIX D**

### **UPLAND CAPPING SYSTEM INSPECTION FORM**

**Former United Heckathorn Superfund Site Upland Capping System Inspection Form**  
**Levin Richmond Terminal, 402 Wright Avenue, Richmond, California**

**I. General Information**

**Site:** Former United Heckathorn Superfund Site, **Inspectors:** Scott Bourne, PE; Brian Bandy  
Levin Richmond Terminal **Organization:** Weiss Associates  
**Address:** 402 Wright Avenue, Richmond, CA **Date and time of inspection:** June 15, 2015; 10:15

**II. Upland Area Concrete Cap, Gravel Cover, and Drainage System Observations**

Note significant cracks, holes, penetrations, damage, settlement, or any exposure of underlying soil in any component of the capping system.

**North Main Terminal (SW-3)**

|  | Yes                                 | No                                  | N/A                                 | Comments  |
|--|-------------------------------------|-------------------------------------|-------------------------------------|---|
| Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | Minor cracks noted.   |
| Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |   |
| Is storm water drainage infrastructure in adequate condition to prevent exposure of underlying soil to runoff? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |   |
| Are corrective actions required?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Continued observation recommended. Sealing of pavement cracks and joints noted in some locations. |
| Attach a photograph of areas requiring corrective action.  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |   |

Describe any recent repairs/maintenance:

No recent corrective actions to concrete cap or gravel cover noted in SW-3 area.

Describe conditions and locations of the capping system which require attention:

No material breach or areas with significant deterioration and a potential for exposure of the underlying subgrade were identified in this area. See photos 1-5.

Describe corrective actions required and their date(s) of implementation:

Continue to monitor for minor cracks to see if their conditions worsen or if they continue to propagate.

Signature:

*Scott Bourne*

Date: 6/15/2015

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**North Main Terminal/United Heckathorn (SW-4)**

**Yes No N/A Comments**

Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Minor cracks noted.

Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Additional gravel needed in area identified in photo 6.

Is storm water drainage infrastructure in adequate condition to prevent exposure of underlying soil to runoff?

☒ ☐ ☐

Are corrective actions required?

☒ ☐ ☐

Additional gravel needed in area identified in photo 6.

Attach a photograph of areas requiring corrective action.

☒ ☐ ☐

Photograph 6, Appendix A

Describe any recent repairs/maintenance:

No recent corrective actions to concrete cap or gravel cover noted in SW-4 area.

Describe conditions and locations of the capping system which require attention:

Area of gravel cover in need of additional gravel (photo 6).

Describe corrective actions required and their date(s) of implementation:

Continue to monitor for minor cracks to see if their conditions worsen or if they continue to propagate (photo 8).  
Add additional gravel to the gravel cover area identified in photo 6.

Signature:

*Scott Bourne*

Date: 6/15/2015

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**North Main Terminal/United Heckathorn (SW-5)**

Yes No N/A Comments

Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Minor cracks noted.

Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Additional gravel needed in area identified in photo 11.

Is storm water drainage infrastructure in adequate condition to prevent exposure of underlying soil to runoff?

☒ ☐ ☐

Are corrective actions required?

☒ ☐ ☐

Additional gravel needed in area identified in photo 10.

Attach a photograph of areas requiring corrective action.

☒ ☐ ☐

Photograph 10, Appendix A

Describe any recent repairs/maintenance:

Gravel was added in July 2014 in areas of thinning and exposed geotextile in the SW-5 area, as recommended in the 2013-2014 Annual Report.

Describe conditions and locations of the capping system which require attention:

Area of gravel cover in need of additional gravel (photo 10).

Describe corrective actions required and their date(s) of implementation:

Continue to monitor for minor cracks to see if their conditions worsen or if they continue to propagate (photos 9 and 11).  
Add additional gravel to the gravel cover area identified in photo 10.

Signature:



Date: 6/15/2015

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**North Main Terminal/United Heckathorn (SW-6)**

Yes No N/A Comments

Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Areas of deteriorated concrete and minor cracks noted.

Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Is storm water drainage infrastructure in adequate condition to prevent exposure of underlying soil to runoff?

☒ ☐ ☐

Are corrective actions required?

☒ ☐ ☐

Sealing of broken areas in concrete cap recommended.

Attach a photograph of areas requiring corrective action.

☒ ☐ ☐

Photographs 17/18, Appendix A

Describe any recent repairs/maintenance:

No recent corrective actions to concrete cap or gravel cover noted in SW-6 area.

Describe conditions and locations of the capping system which require attention:

Continued monitoring of small areas of deteriorating concrete recommended, especially south of inlet 6-DI-15/north of 5-DI-12.

Describe corrective actions required and their date(s) of implementation:

Continue to monitor for minor cracks to see if their conditions worsen or if they continue to propagate (photos 12, 14, 15, 16).  
Surface pavement repair and sealing as needed especially south of inlet 6-DI-15.

Signature: 

Date: 6/15/2015

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**North Main Terminal/United Heckathorn (SW-7)**

**Yes No N/A Comments**

Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Minor cracks noted.

Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?

☐ ☐ ☒

Is storm water drainage infrastructure in adequate condition to prevent exposure of underlying soil to runoff?

☒ ☐ ☐

Are corrective actions required?

☐ ☒ ☐

Attach a photograph of areas requiring corrective action.

☐ ☐ ☒

Describe any recent repairs/maintenance:

No recent corrective actions to concrete cap or gravel cover noted in SW-7 area.

Describe conditions and locations of the capping system which require attention:

Minor cracks observed in the SW-7 concrete cap knoll (photos 13 and 14).

Describe corrective actions required and their date(s) of implementation:

No corrective actions required; however, continue to monitor cracks noted in this inspection for further propagation and settlement.

Signature:

*Scott Bourne*

Date: 6/15/2015

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